Oil Conservation Division

Incident ID	NAPP2209731445
District RP	
Facility ID	
Application ID	

## Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.11 NMAC
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
Description of remediation activities
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: _Garrett Green Title: _Environmental Coordinator Signature: Date:08/19/2022 email:garrett.green@exxonmobil.com Telephone:575-200-0729
OCD Only
Received by: <u>Robert Hamlet</u> Date: <u>11/23/2022</u>
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.
Closure Approved by: <u>Robert Hamlet</u> Date: <u>11/23/2022</u>
Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Page 2cof 256

Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NAPP2209731445
District RP	
Facility ID	
Application ID	

## **Release Notification**

## **Responsible Party**

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

### **Location of Release Source**

Longitude

-103.85445

32.54635 Latitude

(NAD 83 in decimal de	grees to 5 decimal places)
Site Name BEU 5E Han Solo 105H	Site Type Production Well
Date Release Discovered $03/24/2022$	API# (if applicable)

Unit Letter	Section	Township	Range	County
G	27	208	31E	Eddy

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

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
✓ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Produced Water w/ FR	15.00 BBLS	4.00 BBLS
Cause of Release	frac operations, a mechanical pop-off washed out, caus	ing fluids to release both to containment and pad $\mathbf{A}$

During frac operations, a mechanical pop-off washed out, causing fluids to release both to containment and pad. A vacuum truck recovered fluids from containment. A third-party contractor has been retained for remediation purposes.

Page 2

NA

### Oil Conservation Division

Incident ID	NAPP2209731445
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Application ID	

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

### **Initial Response**

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

 $\checkmark$  The source of the release has been stopped.

★ The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

▲ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have <u>not</u> been undertaken, explain why:

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

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

Printed Name: Adrian Baker Signature:	Title: $\frac{\text{SSHE Coordinator}}{\text{Date: }\frac{4/7/22}{432-236-3808}}$
email:	Telephone:
OCD Only	
Received by: Jocelyn Harimon	Date:

Location:	BEU 5E Han Solo 105H	1	
Spill Date:	3/24/2022		
	Area 1		
Approximate A	rea =	22.46	cu. Ft.
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	4.00	bbls
	Area 2		
Approximate A	rea =	7056.00	sq. ft.
Average Satura	tion (or depth) of spill =	3.50	inches
Average Porosi	ty Factor =	0.03	
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	11.00	bbls
	τοται νοι ιμμε ορι ρα	K	

TOTAL VOLUME OF LEAK						
Total Crude Oil =	0.0	) bbls				
Total Produced Water =	15.0	) bbls				
TOTAL VOLUME RECOVERED						
Total Crude Oil =	0.0	) bbls				
Total Produced Water =	4.0	) bbls				

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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	96600
	Action Type:
	[C-141] Release Corrective Action (C-141)
CONDITIONS	

#### Created By Condition Condition Date 4/7/2022 jharimon None

CONDITIONS

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.

Action 96600

Received by OCD: 8/19/2022 11:50:23 AM Form C-141 State of New Mexico

Oil Conservation Division

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Incident ID	NAPP2209731445
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## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>50-100 (</u> ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	🗌 Yes 🔀 No

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

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

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

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

:23 AM		Page 7 of 256
	Incident ID	NAPP2209731445
Oil Conservation Division	District RP	
	Facility ID	
	Application ID	
o report and/or file certain release notifications and pe e acceptance of a C-141 report by the OCD does not re mediate contamination that pose a threat to groundwat report does not relieve the operator of responsibility fo Title:Environmental 0 Date:08	rform corrective actions for rele lieve the operator of liability sho er, surface water, human health or compliance with any other fee Coordinator	ases which may endanger ould their operations have or the environment. In deral, state, or local laws
Date:		
	o report and/or file certain release notifications and per exacceptance of a C-141 report by the OCD does not re mediate contamination that pose a threat to groundwate report does not relieve the operator of responsibility for Title: _Environmental Date:08 1.com Telephone:57:	Oil Conservation Division       Incident ID District RP Facility ID Application ID         iven above is true and complete to the best of my knowledge and understand that purst o report and/or file certain release notifications and perform corrective actions for rele acceptance of a C-141 report by the OCD does not relieve the operator of liability she mediate contamination that pose a threat to groundwater, surface water, human health report does not relieve the operator of responsibility for compliance with any other feature 

Oil Conservation Division

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Incident ID	NAPP2209731445	
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.

<b><u>Closure Report Attachment Checklist</u>:</b> Each of the following	items must be included in the closure report.
$\square$ 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 re- human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regul restore, reclaim, and re-vegetate the impacted surface area to the co- accordance with 19.15.29.13 NMAC including notification to the O Printed Name:Garrett Green	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in
OCD Only	
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 //or regulations.
Closure Approved by:	Date:
Printed Name:	Title:
—	

Page 6



August 19, 2022

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

#### Re: Closure Request BEU 5E Han Solo 105H Incident Number NAPP2209731445 Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this Closure Request to document site assessment, excavation, and soil sampling activities at the BEU 5E Han Solo 105H (Site). The purpose of the site assessment and soil sampling activities was to address potential impacts to soil following a release of produced water with friction reducer at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, XTO is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2209731445.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 27, Township 20 South, Range 31 East, in Eddy County, New Mexico (32.54635° N, 103.85445°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

On March 24, 2022, a mechanical pop-off washed out during hydraulic fracturing operations resulting in the release of 15.0 barrels (bbls) of produced water, treated with friction reducer, into a temporary lined containment and onto the surface of the well pad. Produced water is recycled through filtering and separation, then mixed in a blender with friction reducer and used as hydraulic fracturing fluid during the well completion process. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 4.0 bbls of produced water were recovered from within the lined containment and the surface of the well pad. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on April 7, 2022. The release was assigned Incident Number NAPP2209731445.

The temporary liner was removed prior to beginning site assessment activities. As such, a liner inspection could not be completed. The release extent was identified based on information provided on the Form C-141 and visual observations.

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 601 North Marienfield, Suite 400 | Midland, TX 78209 | ensolum.com Texas PG Firm No. 50588 | Texas PE Firm No. F-21843 BEU 5E Han Solo 105H

**ENSOLUM** 

### SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be between 50 and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 323307103503901, located approximately 0.7 miles northeast of the Site. The groundwater well has a reported depth to groundwater of 77 feet bgs and a total depth of 156 feet bgs. Ground surface elevation at the groundwater well location is 3,510 feet above mean sea level (amsl), which is approximately 17 feet lower in elevation than the Site. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 7,974 feet east 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 ACTIVITIES

On May 24, 2022, Ensolum personnel visited the Site to evaluate the release extent. Four preliminary soil samples (SS01 through SS04) were collected within the release extent from a depth of approximately 0.5 feet bgs to assess the presence or absence of impacted soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix B.

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

BEU 5E Han Solo 105H

E ENSOLUM

Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on visible staining in the release area, continued assessment activities were warranted.

#### **DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES**

On July 17, 2022, four potholes (PH01 through PH04) were advanced via backhoe within the release extent to a depth of 2 feet bgs. Delineation soil samples were collected from each pothole at depths of 1-foot and 2 feet bgs. In addition, four lateral delineation soil samples (SS05 through SS08) were collected around the visible release extent from a depth of 0.5 feet bgs to confirm the lateral extent of the release. Soil from the delineation activities was field screened for volatile aromatic hydrocarbons and chloride using a PID and Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips, respectively. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The potholes and lateral delineation soil sample locations are depicted on Figure 3.

Laboratory analytical results for delineation pothole soil samples PH01/PH01A through PH04/PH04A and lateral delineation soil samples SS05 through SS08 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations are compliant with the Closure Criteria and compliant with the most stringent Table 1 Closure Criteria.

Soil was excavated from the release area in the area represented by preliminary soil sample SS03, which contained elevated chloride concentrations. Excavation activities were performed using a backhoe and transport vehicle. The excavation occurred on the well pad. To direct excavation activities, Ensolum personnel screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively.

Following removal of the soil, Ensolum personnel collected a 5-point composite soil sample representing the 190 square feet floor of the excavation. The 5-point composite sample was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation at a depth of 1 foot bgs. Due to the shallow depth of the excavation, soil from the sidewalls was incorporated into the floor sample. The excavation soil sample was collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample location are presented on Figure 4.

The final excavation extent measured approximately 190 square feet. A total of approximately 12 cubic yards of soil was removed during the excavation activities. The soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico. After completion of confirmation sampling, the excavation area was secured with fencing.

#### LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for preliminary and delineation soil samples indicated benzene, BTEX, TPH-DRO/TPH-GRO, TPH, and chloride concentrations were compliant with the Closure Criteria and most samples were compliant with the most stringent Table 1 Closure Criteria. XTO excavated soil in one location with elevated chloride concentrations, and results from excavation floor soil sample FS01 were compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

BEU 5E Han Solo 105H

#### **CLOSURE REQUEST**

Site assessment and excavation activities were conducted at the Site to address the March 24, 2022, release of produced water with friction reducer. Laboratory analytical results for delineation soil samples and the excavation soil sample indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Based on the soil sample analytical results, no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. Notifications to NMOCD regarding sampling events are included in Attachment E. The safety data sheet (SDS) for friction reducer is provided in Appendix F.

Excavation of impacted soil has mitigated impacts exceeding the most stringent Table 1 Closure Criteria at this Site. Depth to groundwater has been estimated to be between 50 and 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes the remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2209731445.

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

Sincerely, Ensolum, LLC

SnJ. Delill

Ben Belill Project Geologist

Ashley L. ager

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

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

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Preliminary Soil Sample Locations
- Figure 3 Delineation Soil Sample Locations
- Figure 4 Excavation Soil Sample Locations
- Table 1Soil Sample Analytical Results
- Appendix A Referenced Well Records
- Appendix B Photographic Log
- Appendix C Lithologic / Soil Sampling Logs
- Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix E NMOCD Notifications
- Appendix F Safety Data Sheet for Friction Reducer



FIGURES

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Received by OCD: 8/19/2022 11:50:23 AM













## TABLES

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## **E** ENSOLUM

	TABLE 1         SOIL SAMPLE ANALYTICAL RESULTS         BEU 5E Han Solo 105H         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
				Preliminar	y Assessment S	oil Samples	I		I	I
SS01	05/24/2022	0.5	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	221
SS02	05/24/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	485
SS03	05/24/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	1,570
SS04	05/24/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	476
				Del	ineation Soil San	nples				
PH01	07/19/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	27.2
PH01A	07/19/2022	2	<0.00199	<0.00398	<50.0	83.6	<50.0	83.6	83.6	148
PH02	07/19/2022	1	<0.00200	<0.00399	<49.9	55.4	<49.9	55.4	55.4	173
PH02A	07/19/2022	2	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	152
PH03	07/19/2022	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	20.8
PH03A	07/19/2022	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	76.3
PH04	07/19/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	34.6
PH04A	07/19/2022	2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	78.2
SS05	07/19/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	192
SS06	07/19/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	109
SS07	07/19/2022	0.5	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	138
SS08	07/19/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	146
				Exc	cavation Soil San	nples				
FS01	07/19/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	284

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics DRO: Diesel Range Organics ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

Grey text indicate soil sample removed during excavation activities

Ensolum

.



## 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 data from over 13,500 stations nationwide.
- Full News 🔝

Groundwater levels for the Nation

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

## Search Results -- 1 sites found

site\_no list =

• 323307103503901

### Minimum number of levels = 1

Save file of selected sites to local disk for future upload

## USGS 323307103503901 20S.31E.23.33312

Available data for this site Groundwater: Field measurements V GO

Eddy County, New Mexico Hydrologic Unit Code 13060011 Latitude 32°33'07", Longitude 103°50'39" NAD27 Land-surface elevation 3,510 feet above NAVD88 The depth of the well is 156 feet below land surface. This well is completed in the Other aquifers (N99990THER) national aquifer. This well is completed in the Rustler Formation (312RSLR) local aquifer.

### Output formats

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



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

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

Accessibility FOIA Privacy 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: USGS Water Data Support Team Page Last Modified: 2022-08-11 18:07:52 EDT 0.68 0.52 nadww01



USGS Home Contact USGS Search USGS



National Water Information System: Web Interface

USGS Water Resources

 Data Category:
 Geographic Area:

 Groundwater
 ✔

 United States
 ✔

Click to hideNews Bulletins

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

Groundwater levels for the Nation

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

#### Search Results -- 1 sites found

Agency code = usgs site\_no list =

• 323307103503901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 323307103503901 20S.31E.23.33312

Eddy County, New Mexico Latitude 32°33'07", Longitude 103°50'39" NAD27 Land-surface elevation 3,510 feet above NAVD88 The depth of the well is 156 feet below land surface. This well is completed in the Other aquifers (N9999OTHER) national aquifer. This well is completed in the Rustler Formation (312RSLR) local aquifer.

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

Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1983-01-20		D	62610		3427.56	NGVD29	1	Z		
1983-01-20		D	62611		3429.16	NAVD88	1	Z		
1983-01-20		D	72019	80.84			1	Z		
1986-01-22		D	62610		3427.91	NGVD29	1	Z		
1986-01-22		D	62611		3429.51	NAVD88	1	Z		
1986-01-22		D	72019	80.49			1	Z		
1994-03-02		D	62610		3430.52	NGVD29	1	S		
1994-03-02		D	62611		3432.12	NAVD88	1	S		
1994-03-02		D	72019	77.88			1	S		

Explanation					
Section Code Description					
Water-level date-time accuracy	D	Date is accurate to the Day			
Parameter code	62610	Groundwater level above NGVD 1929, feet			
Parameter code	62611	Groundwater level above NAVD 1988, feet			

#### Released to Imaging: 11/23/2022 1:52:32 PM

#### Received by OCD: 8/19/2022 11:50:23 AM

Section	Code	Description
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	А	Approved for publication Processing and review completed.

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

Accessibility FOIA Privacy 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: 2022-08-11 18:08:31 EDT 0.26 0.23 nadww01 USA.gov



## APPENDIX B

Photographic Log



XTO Energy, Inc BEU 5E Han Solo 105H Ensolum Job Number: 03E1558056



**E NSOLUM** 

Photograph 1 Date: May 24, 2022 Description: Site Assessment Activities



Photograph 2 Date: July 19, 2022 Description: Delineation Activities



**Photograph 3** Date: July 19, 2022 Description: Excavation Activities.



Photograph 4 Date: July 19, 2022 Description: Excavation Activities



## APPENDIX C

Lithologic / Soil Sampling Logs

								Sample Name: PH01	Date: 7/19/2022
		-		-	-			Site Name: BEU 5E Han Solo 105H	Date: 7/15/2022
115			N	5	01	. U	M	Incident Number: NAPP220973144	15
				1.00			Job Number: 03E1558056	rJ	
								Logged By: Conner Shore	Method: Backhoe
Coord	inates: 3			-				Hole Diameter: N/A	Total Depth: 2'
					ith HACH Ch	loride Test S			
	Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.							,	
Moisture Content	Moisture Content (ppm) (				USCS/Rock Symbol	Lithologic Des	criptions		
D	<179.2	0.4	N	PH01	1'	L 1'	cche	0-1', CALICHE, dry, off white stain, no odor. fill.	e, unconsolidated, no
	<179.2	0.0	NI	PH01A	2'	2'	cn cm		
D	<1/9.2	0.0	N	PHUIA	2 _ - -	2  	sp-sm	1'-2', SILTY SAND, dry, redd graded, fine-very fine gra odor.	
					-	-		Total Depth @ 2 feet bgs.	
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								Sample Name: PH02	Date: 7/19/2022
		-			<b>•</b>			Site Name: BEU 5E Han Solo 105H	Date. // 13/2022
115		=	N	5	01	. U	M	Incident Number: NAPP220973144	15
							Job Number: 03E1558056		
								Logged By: Conner Shore	Method: Backhoe
Coord				3.854841				Hole Diameter: N/A	Total Depth: 2'
					ith HACH Ch	loride Test S			
	Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.							,	
Moisture Content	Chloride (ppm) (pp				-	USCS/Rock Symbol	Lithologic Des	criptions	
D	201.6	0.0	N	PH02	1'	L - 1'	cche	0-1', CALICHE, dry, off white stain, no odor. fill.	e, unconsolidated, no
	<170.2	0.0	N		2'	2'	cn cm		
D	<179.2	0.0	N	PH02A	2 _ - -	_ 2 - - -	sp-sm	1'-2', SILTY SAND, dry, redd graded, fine-very fine gra odor.	
					-	-		Total Depth @ 2 feet bgs.	
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							Sample Name: PH03	Date: 7/19/2022
	-		-	0			Site Name: BEU 5E Han Solo 105H	
	E	N	5	OL	. U		Incident Number: NAPP220973144	15
Concession in which the							Job Number: 03E1558056	-
	LITHOL	OGIO		AMPLING	Logged By: Conner Shore	Method: Backhoe		
Coordinates: 3			-				Hole Diameter: N/A	Total Depth: 2'
				ith HACH Ch	loride Test S		PID for chloride and vapor, respect	
performed with	performed with 1:4 dilution factor of soil to distilled water. No correction factors included.							
Moisture Content Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	criptions
D <179.2	5.2	N	PH03	1'	L 1'	cche	0-1', CALICHE, dry, off white stain, no odor. fill.	e, unconsolidated, no
D <179.2	1.1	N	PH03A	2' _	2'	sp-sm	1'-2', SILTY SAND, dry, reddi graded, fine-very fine gra odor.	
							Total Depth @ 2 feet bgs.	

								Sample Name: PH04	Date: 7/19/2022
		-							Daie. //19/2022
		=	N	S	01		M	Site Name: BEU 5E Han Solo 105H	16
	-					Incident Number: NAPP220973144 Job Number: 03E1558056	t)		
									Method: Backhoe
Coord								Logged By: Conner Shore Hole Diameter: N/A	Total Depth: 2'
					ith HACH Ch	loride Test 9			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.									
Moisture Content	Chloride (ppm) (ppm) (ppm) (ppm) (ppm) (ppm) (ppm) (tp				-	USCS/Rock Symbol	Lithologic Des	criptions	
D	<179.2	0.0	N	PH04	1'	L 1'	cche	0-1', CALICHE, dry, off white stain, no odor. fill.	e, unconsolidated, no
D	<179.2	0.1	N	PH04A	2'	2'	sp-sm	1'-2', SILTY SAND, dry, reddi graded, fine-very fine gra odor.	
					-	-		Total Depth @ 2 feet bgs.	
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APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

Received by OCD: 8/19/2022 11:50:23 AM

LINKS

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

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Ask— The Expert

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## Environment Testing America

## **ANALYTICAL REPORT**

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

## Laboratory Job ID: 890-2341-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E Han Solo 105H

## For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 6/6/2022 11:53:25 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com of 256

13 14

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

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

SDG: 03E1558056

## **Table of Contents**

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QC Association Summary	17
Lab Chronicle	20
Certification Summary	22
Method Summary	23
Sample Summary	24
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	Definitions/Glossary	
Client: Ensolum		2
	EU 5E Han Solo 105H SDG: 03E1558056	
Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	8
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	13
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	

MDC Minimum Detectable Concentration (Radiochemistry)

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

NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
1150	

NEGNegative / AbsentPOSPositive / PresentPQLPractical Quantitation Limit

PQL Practical Quant PRES Presumptive

- QC
   Quality Control

   RER
   Relative Error Ratio (Radiochemistry)
- RL Reporting Limit or Requested Limit (Radiochemistry)
- RPD Relative Percent Difference, a measure of the relative difference between two points
- TEF Toxicity Equivalent Factor (Dioxin)
- TEQ Toxicity Equivalent Quotient (Dioxin)
- TNTC Too Numerous To Count

4

5

Job ID: 890-2341-1 SDG: 03E1558056

#### Job ID: 890-2341-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

Project/Site: BEU 5E Han Solo 105H

#### Narrative

Job Narrative 890-2341-1

#### Receipt

The samples were received on 5/25/2022 2:24 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-26464 and analytical batch 880-26542 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

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

#### HPLC/IC

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

Dil Fac

Job ID: 890-2341-1 SDG: 03E1558056

# **Client Sample ID: SS01**

Date Received: 05/25/22 14:24

Sample Depth: 0.5'

Client: Ensolum

Analyte

Lab Sample ID: 890-2341-1

Analyzed

# Matrix: Solid

5

Benzene								
	<0.00198	U	0.00198	mg/Kg		05/27/22 15:07	05/31/22 14:16	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/27/22 15:07	05/31/22 14:16	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/27/22 15:07	05/31/22 14:16	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/27/22 15:07	05/31/22 14:16	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/27/22 15:07	05/31/22 14:16	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/27/22 15:07	05/31/22 14:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			05/27/22 15:07	05/31/22 14:16	1
1,4-Difluorobenzene (Surr)	105		70 - 130			05/27/22 15:07	05/31/22 14:16	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			05/31/22 15:29	1
Method: 8015 NM - Diesel Rang	e Organics (DR	0) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/31/22 09:45	1
Method: 8015B NM - Diesel Ran	nge Organics (D							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0		50.0	mg/Kg		05/27/22 11:19	05/28/22 01:11	1
(GRO)-C6-C10				0.0				
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 01:11	1
C10-C28)						05/07/00 11.10	05/28/22 01:11	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/27/22 11:19	00/20/22 01.11	
	<50.0 <b>%Recovery</b>	U <b>Qualifier</b>	50.0 <i>Limits</i>	mg/Kg		Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)				mg/Kg				
Oll Range Organics (Over C28-C36) Surrogate	%Recovery		Limits	mg/Kg		Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	% <b>Recovery</b> 104 112	Qualifier	Limits 70 - 130	mg/Kg		Prepared 05/27/22 11:19	Analyzed 05/28/22 01:11	Dil Fac
Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	%Recovery 104 112 romatography -	Qualifier	Limits 70 - 130	mg/Kg Unit	D	Prepared 05/27/22 11:19	Analyzed 05/28/22 01:11	Dil Fac

Unit

D

Prepared

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/27/22 14:42	06/02/22 21:17	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/27/22 14:42	06/02/22 21:17	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/27/22 14:42	06/02/22 21:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/27/22 14:42	06/02/22 21:17	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/27/22 14:42	06/02/22 21:17	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/27/22 14:42	06/02/22 21:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			05/27/22 14:42	06/02/22 21:17	1

**Eurofins Carlsbad** 

Date Collected: 05/24/22 13:30

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

Project/Site: BEU 5E Han Solo 105H

Released to Imaging: 11/23/2022 1:52:32 PM

Project/Site: BEU 5E Han Solo 105H

# **Client Sample Results**

Job ID: 890-2341-1 SDG: 03E1558056

# Lab Sample ID: 890-2341-2

Matrix: Solid

5

Date Collected: 05/24/22 13:35 Date Received: 05/25/22 14:24

Client Sample ID: SS02

Sample Depth: 0.5'

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	101		70 - 130			05/27/22 14:42	06/02/22 21:17	
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			05/31/22 15:29	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			05/31/22 09:45	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 01:32	
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 01:32	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 01:32	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	88		70 - 130			05/27/22 11:19	05/28/22 01:32	
o-Terphenyl	95		70 - 130			05/27/22 11:19	05/28/22 01:32	
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	485		4.97	mg/Kg			05/29/22 23:15	
lient Sample ID: SS03						Lab San	nple ID: 890-	2341-3
ate Collected: 05/24/22 13:40							Matri	x: Solid
ate Received: 05/25/22 14:24								
ample Depth: 0.5'								

Method: 8021B - Volatile Orga	nic Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00201	U	0.00201	mg/Kg		06/03/22 09:28	06/03/22 16:57	1
Toluene	0.00271		0.00201	mg/Kg		06/03/22 09:28	06/03/22 16:57	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/03/22 09:28	06/03/22 16:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/03/22 09:28	06/03/22 16:57	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/03/22 09:28	06/03/22 16:57	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/03/22 09:28	06/03/22 16:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			06/03/22 09:28	06/03/22 16:57	1
1,4-Difluorobenzene (Surr)	99		70 - 130			06/03/22 09:28	06/03/22 16:57	1
– Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/31/22 15:29	1
- Method: 8015 NM - Diesel Ran	ge Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/31/22 09:45	1

# **Client Sample Results**

Job ID: 890-2341-1 SDG: 03E1558056

Matrix: Solid

Lab Sample ID: 890-2341-3

# **Client Sample ID: SS03**

Project/Site: BEU 5E Han Solo 105H

Date Collected: 05/24/22 13:40 Date Received: 05/25/22 14:24

Sample Depth: 0.5'

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 01:54	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 01:54	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 01:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			05/27/22 11:19	05/28/22 01:54	1
o-Terphenyl	99		70 - 130			05/27/22 11:19	05/28/22 01:54	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1570	24.8	mg/Kg			05/29/22 23:21	5

# **Client Sample ID: SS04**

#### Date Collected: 05/24/22 13:50 Date Received: 05/25/22 14:24

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		06/03/22 09:28	06/03/22 17:18	1
Toluene	<0.00201	U	0.00201	mg/Kg		06/03/22 09:28	06/03/22 17:18	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/03/22 09:28	06/03/22 17:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/03/22 09:28	06/03/22 17:18	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/03/22 09:28	06/03/22 17:18	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/03/22 09:28	06/03/22 17:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			06/03/22 09:28	06/03/22 17:18	1
1,4-Difluorobenzene (Surr)	97		70 - 130			06/03/22 09:28	06/03/22 17:18	1
- Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/31/22 15:29	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			05/31/22 09:45	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		05/27/22 11:19	05/28/22 02:16	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 02:16	1
C10-C28)	~50.0		50.0	malla		05/07/00 44/40	05/00/00 00:40	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/28/22 02:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			05/27/22 11:19	05/28/22 02:16	1

		Client	Sample Res	sults					1
Client: Ensolum Project/Site: BEU 5E Han Solo 105H							Job ID: 890 SDG: 03E1		2
Client Sample ID: SS04 Date Collected: 05/24/22 13:50						Lab Sa	mple ID: 890- Matri	2341-4 ix: Solid	3
Date Received: 05/25/22 14:24 Sample Depth: 0.5'									4
Method: 300.0 - Anions, Ion Chrom Analyte		Soluble Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	476		5.00	mg/Kg		••••	05/29/22 23:27	1	6
									7
									8
									9
									10
									11
									12
									13
									14

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

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

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-15244-A-5-D MS	Matrix Spike	95	103		
880-15244-A-5-E MSD	Matrix Spike Duplicate	105	101		6
890-2341-1	SS01	99	105		
890-2341-2	SS02	107	101		
890-2341-3	SS03	103	99		
890-2341-4	SS04	97	97		8
890-2346-A-1-E MS	Matrix Spike	101	100		
890-2346-A-1-F MSD	Matrix Spike Duplicate	104	102		0
890-2351-A-5-D MS	Matrix Spike	95	102		J
890-2351-A-5-E MSD	Matrix Spike Duplicate	101	100		
LCS 880-26459/1-A	Lab Control Sample	103	102		
LCS 880-26464/1-A	Lab Control Sample	103	102		
LCS 880-26788/1-A	Lab Control Sample	95	102		
LCSD 880-26459/2-A	Lab Control Sample Dup	101	97		
LCSD 880-26464/2-A	Lab Control Sample Dup	87	104		
LCSD 880-26788/2-A	Lab Control Sample Dup	93	102		
MB 880-26459/5-A	Method Blank	97	99		
MB 880-26464/5-A	Method Blank	102	100		
MB 880-26788/5-A	Method Blank	94	91		

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Percent Surrogate Recovery (Acceptance Limits) 1CO1 OTPH1 (70-130) (70-130) Lab Sample ID **Client Sample ID** 890-2339-A-1-C MS Matrix Spike 91 87 890-2339-A-1-D MSD Matrix Spike Duplicate 86 83 890-2341-1 SS01 104 112 SS02 890-2341-2 88 95 890-2341-3 SS03 99 96 890-2341-4 SS04 95 101 Lab Control Sample LCS 880-26433/2-A 101 100 LCSD 880-26433/3-A Lab Control Sample Dup 102 104 MB 880-26433/1-A Method Blank 103 119 Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

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

	organic compe		·)						
Lab Sample ID: MB 880-264 Matrix: Solid Analysis Batch: 26715	59/5-A					Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batcl	Fotal/NA	4
	MB	МВ							5
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		05/27/22 14:42	06/02/22 13:30	1	
Toluene	<0.00200	U	0.00200	mg/Kg		05/27/22 14:42	06/02/22 13:30	1	_
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/27/22 14:42	06/02/22 13:30	1	7
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/27/22 14:42	06/02/22 13:30	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/27/22 14:42	06/02/22 13:30	1	8
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/27/22 14:42	06/02/22 13:30	1	
	МВ	МВ							9
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed
4-Bromofluorobenzene (Surr)	97		70 - 130	05/27/22 14:42	06/02/22 13:30
1,4-Difluorobenzene (Surr)	99		70 - 130	05/27/22 14:42	06/02/22 13:30

#### Lab Sample ID: LCS 880-26459/1-A Matrix: Solid

#### Analysis Batch: 26715

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09188		mg/Kg		92	70 - 130	
Toluene	0.100	0.09692		mg/Kg		97	70 - 130	
Ethylbenzene	0.100	0.09289		mg/Kg		93	70 - 130	
m-Xylene & p-Xylene	0.200	0.2122		mg/Kg		106	70 - 130	
o-Xylene	0.100	0.1052		mg/Kg		105	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

# Lab Sample ID: LCSD 880-26459/2-A

### Matrix: Solid

Analysis Batch: 26715							Prep	Batch:	26459
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08482		mg/Kg		85	70 - 130	8	35
Toluene	0.100	0.09263		mg/Kg		93	70 - 130	5	35
Ethylbenzene	0.100	0.08725		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1995		mg/Kg		100	70 - 130	6	35
o-Xylene	0.100	0.09854		mg/Kg		99	70 - 130	7	35

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

# Lab Sample ID: 890-2346-A-1-E MS

#### Matrix: Solid ----

Analysis Batch: 26715									Prep	o Batch: 26459
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.100	0.08250		mg/Kg		82	70 - 130	
Toluene	<0.00201	U	0.100	0.08669		mg/Kg		87	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

1

1

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 26459

Job ID: 890-2341-1

SDG: 03E1558056

MS MS

Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Result

0.07650

0.1705

0.08654

Spike

Added

0.100

0.200

0.100

Limits 70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

Lab Sample ID: 890-2346-A-1-E MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 26715

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

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

Sample Sample

<0.00201

<0.00402 U

<0.00201 U

101

100

%Recovery

**Result Qualifier** 

U

MS MS

Qualifier

Job ID: 890-2341-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Batch: 26459

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

76

85

86

D

# 7

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

**Client Sample ID: Method Blank** 

05/31/22 13:12

05/31/22 13:12

**Client Sample ID: Lab Control Sample** 

05/27/22 15:07

05/27/22 15:07

Prep Type: Total/NA

Prep Batch: 26464

Prep Batch: 26459 RPD

#### Matrix: Solid Analysis Batch: 26715

Lab Sample ID: 890-2346-A-1-F MSD

Sample Sample Spike MSD MSD %Rec Result Qualifier Result Qualifier RPD Limit Analyte Added Unit %Rec Limits D Benzene <0.00201 U 0.0996 0.08808 mg/Kg 88 70 - 130 7 35 Toluene <0.00201 U 0.0996 0.09471 mg/Kg 95 70 - 130 9 35 Ethylbenzene <0.00201 U 0.0996 0.08391 84 70 - 130 35 mg/Kg 9 0.199 0.1897 35 m-Xylene & p-Xylene <0.00402 U mg/Kg 95 70 - 130 11 0.0996 <0.00201 U 0.09432 95 70 - 130 35 o-Xylene mg/Kg 9

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 _ 130
1,4-Difluorobenzene (Surr)	102		70 - 130

#### Lab Sample ID: MB 880-26464/5-A Matrix: Solid Analysis Batch: 26542

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		05/27/22 15:07	05/31/22 13:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/27/22 15:07	05/31/22 13:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/27/22 15:07	05/31/22 13:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/27/22 15:07	05/31/22 13:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/27/22 15:07	05/31/22 13:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/27/22 15:07	05/31/22 13:12	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

130
130
-

#### Lab Sample ID: LCS 880-26464/1-A Matrix: Solid Analysis Batch: 26542

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09145		mg/Kg		91	70 - 130	
Toluene	0.100	0.08551		mg/Kg		86	70 - 130	
Ethylbenzene	0.100	0.09034		mg/Kg		90	70 - 130	
m-Xylene & p-Xylene	0.200	0.1798		mg/Kg		90	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

Prep Batch: 26464

# Released to Imaging: 11/23/2022 1:52:32 PM

1

1

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

Lab Sample ID: LCS 880-26464/1-A

Matrix: Solid

#### Job ID: 890-2341-1 SDG: 03E1558056

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

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

Matrix: Solid											
Analysis Batch: 26542									Prep	Batch: 2	26464
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
o-Xylene			0.100	0.08334		mg/Kg		83	70 - 130		
	LCS	LCS									
Surrogate			Limits								
4-Bromofluorobenzene (Surr)	103		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Completion (CCD 890.0						Clie			l ch Contro	Compl	- D
Lab Sample ID: LCSD 880-2 Matrix: Solid	.0404/2-A					Cilei	it Sali	ipie iD. i	Lab Contro		
										Type: Tot	
Analysis Batch: 26542			Spike		LCSD				%Rec	Batch: 2	20404 RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene			0.100	0.1022	Quanner	mg/Kg		102	70 - 130	11	35
Toluene			0.100	0.08769		mg/Kg		88	70 - 130 70 - 130	3	35
Ethylbenzene			0.100	0.09090		mg/Kg		91	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1731		mg/Kg		87	70 - 130	4	35
o-Xylene			0.100	0.07906		mg/Kg		79	70 - 130	5	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1 Due weefly a web a week a week a	87		70 - 130								
4-Bromonuorobenzene (Surr)	07										
1,4-Difluorobenzene (Surr)	104		70 - 130					Client	Sample ID Prep T	: Matrix : Type: Tot	
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-A Matrix: Solid	104							Client	Prep T		al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-A Matrix: Solid	104	Sample		MS	MS			Client	Prep T	Type: Tot	al/NA
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-A Matrix: Solid Analysis Batch: 26542 Analyte	104 A-5-D MS Sample Result	Qualifier	70 - 130		MS Qualifier	Unit	<u>D</u>	Client %Rec	Prep T Prep	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-A Matrix: Solid Analysis Batch: 26542	104 A-5-D MS Sample	Qualifier	70 - 130 Spike			- <mark>Unit</mark> mg/Kg	<u>D</u>		Prep T Prep %Rec	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-A Matrix: Solid Analysis Batch: 26542 Analyte	104 A-5-D MS Sample Result	Qualifier	70 - 130 Spike Added	Result			D	%Rec	Prep 1 Prep %Rec Limits	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-A Matrix: Solid Analysis Batch: 26542 Analyte Benzene	104 A-5-D MS 	Qualifier U U	70 - 130 Spike Added 0.101	<b>Result</b> 0.09274 0.07569	Qualifier	mg/Kg	<u>D</u>	%Rec 92	Prep T Prep %Rec Limits 70 - 130	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene	104 A-5-D MS 	Qualifier U U U F1	70 - 130 Spike Added 0.101 0.101	<b>Result</b> 0.09274 0.07569	Qualifier F1	mg/Kg mg/Kg	<u> </u>	% <b>Rec</b> 92 75	Prep T Prep %Rec Limits 70 - 130 70 - 130	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202	Qualifier U U U F1 U F1	70 - 130 Spike Added 0.101 0.101 0.101	Result           0.09274           0.07569           0.06897	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg	<u>D</u>	%Rec 92 75 68	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00403 <0.00202	Qualifier U U U F1 U F1	70 - 130 Spike Added 0.101 0.101 0.101 0.202	Result           0.09274           0.07569           0.06897           0.1325	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 92 75 68 66	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00403 <0.00202	Qualifier U U U F1 U F1 U F1 WS	70 - 130 Spike Added 0.101 0.101 0.101 0.202	Result           0.09274           0.07569           0.06897           0.1325	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 92 75 68 66	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00202 <0.00403 <0.00202 MS	Qualifier U U U F1 U F1 U F1 WS	Spike           Added           0.101           0.101           0.101           0.101           0.101           0.101           0.101	Result           0.09274           0.07569           0.06897           0.1325	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	D	%Rec 92 75 68 66	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00403 <0.00202 MS %Recovery	Qualifier U U U F1 U F1 U F1 WS	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits	Result           0.09274           0.07569           0.06897           0.1325	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	%Rec 92 75 68 66	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202	Qualifier U U U F1 U F1 U F1 WS	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits 70 - 130	Result           0.09274           0.07569           0.06897           0.1325	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 92 75 68 66 60	Prep 1           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot Batch: 2	al/NA 26464
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202	Qualifier U U U F1 U F1 U F1 WS	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits 70 - 130	Result           0.09274           0.07569           0.06897           0.1325	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 92 75 68 66 60	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: 2	licate
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202	Qualifier U U U F1 U F1 U F1 WS	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits 70 - 130	Result           0.09274           0.07569           0.06897           0.1325	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 92 75 68 66 60	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Dike Dup	licate
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 <0.00202	Qualifier U U U F1 U F1 U F1 MS Qualifier	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits 70 - 130	Result 0.09274 0.07569 0.06897 0.1325 0.06031	Qualifier F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 92 75 68 66 60	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: 2	licate tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00403 <0.00202 MS %Recovery 95 103 A-5-E MSD Sample	Qualifier U U U F1 U F1 U F1 MS Qualifier	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits 70 - 130 70 - 130	Result 0.09274 0.07569 0.06897 0.1325 0.06031	Qualifier F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 92 75 68 66 60	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep T Prep T	Dike Dup	licate tal/NA 26464 26464 RPD
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00403 <0.00202 MS %Recovery 95 103 A-5-E MSD Sample	Qualifier U U U F1 U F1 U F1 MS Qualifier Sample Qualifier	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits 70 - 130 70 - 130 70 - 130	Result 0.09274 0.07569 0.06897 0.1325 0.06031	Qualifier F1 F1 F1 MSD	mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec 92 75 68 66 60	Prep T Prep %Rec Limits 70 - 130 70 - 190 %Rec	Dike Dup Dike Tot Batch: 2	licate tal/NA 26464 tal/NA 26464 RPD Limit
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte	104 A-5-D MS Sample Result <ul> <li>&lt;0.00202</li> <li>&lt;0.00202&lt;</li></ul>	Qualifier U U U F1 U F1 U F1 MS Qualifier U	70 - 130 Spike Added 0.101 0.101 0.202 0.101 Limits 70 - 130 70 - 130 70 - 130 70 - 130	Result           0.09274           0.07569           0.06897           0.1325           0.06031	Qualifier F1 F1 F1 MSD	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient Sa	%Rec 92 75 68 66 60 80 80 80 80 80 80 80 80 80 80 80 80 80	Prep T Prep %Rec Limits 70 - 130 70 - 190 70 - 130 70 - 190 70 - 1	Dike Dup Dike Dup Dype: Tot Batch: 2	licate tal/NA 26464 26464 RPD Limit
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene	104 A-5-D MS Sample Result <0.00202 <0.00202 <0.00202 <0.00202 <0.00202 MS %Recovery 95 103 A-5-E MSD Sample Result <0.00202	Qualifier U U U F1 U F1 U F1 MS Qualifier U U U	70 - 130         Spike         Added         0.101         0.101         0.101         0.202         0.101         0.202         0.101         0.202         0.101         0.202         0.101         0.202         0.101         0.202         0.101         Spike         Added         0.0998	Result           0.09274           0.07569           0.06897           0.1325           0.06031   MSD           Result           0.09451	Qualifier F1 F1 F1 MSD	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient Sa	%Rec           92           75           68           66           60	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9 . Matrix Sp Prep 7 Prep 7 %Rec Limits 70 - 130	Dike Dup Type: Tot Batch: 2 Dike Dup Type: Tot Batch: 2 RPD 2	licate tal/NA 26464 26464 RPD Limit 35 35
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-15244-4 Matrix: Solid Analysis Batch: 26542 Analyte Benzene Toluene	104 A-5-D MS Sample Result <ul> <li>&lt;0.00202</li> <li>&lt;0.00202</li> <li>&lt;0.00202</li> <li>&lt;0.00202</li> <li>&lt;0.00202</li> <li><i>MS</i></li> <li><i>%Recovery</i></li> <li>95</li> <li>103</li> </ul> <li>A-5-E MSD</li> <li>Sample Result <ul> <li>&lt;0.00202</li> <li><ul> <li>&lt;</li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li>	Qualifier U U U F1 U F1 U F1 MS Qualifier Qualifier U U U U F1	70 - 130         Spike         Added         0.101         0.101         0.101         0.101         0.101         0.202         0.101         0.202         0.101         0.202         0.101         0.202         0.101         0.202         0.101         D.202         0.101         D.202         0.101         D.0998         0.0998	Result           0.09274           0.07569           0.06897           0.1325           0.06031             MSD           Result           0.09451           0.08715	Qualifier F1 F1 F1 MSD	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec           92           75           68           66           60	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 %Rec Limits 70 - 130 70 - 130	Dike Dup Type: Tot Batch: 2 Dike Dup Type: Tot Batch: 2 2 14	licate tal/NA

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

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

Method: 8021B - Volatile	Organic Compo	ounas (	SC) (Contin	iuea)								
Lab Sample ID: 880-15244-A	A-5-E MSD						Clie	nt Sa	mple ID:	Matrix Spike	Dup	licate
Matrix: Solid										Prep Type	: Tof	tal/NA
Analysis Batch: 26542										Prep Ba	t <mark>ch:</mark> :	26464
	MSD MSI	<b>-</b>										
Sumo moto	%Recovery Qua		Lingita									
Surrogate 4-Bromofluorobenzene (Surr)			Limits 70 - 130									
	105		70 - 130 70 - 130									
1,4-Difluorobenzene (Surr)	101		70 - 730									
Lab Sample ID: MB 880-267	88/5-A								Client Sa	ample ID: Met	hod	Blank
Matrix: Solid										Prep Type	: Tof	tal/NA
Analysis Batch: 26785										Prep Ba	tch: :	2 <mark>6</mark> 788
	MB	МВ										
Analyte	Result	Qualifier	R	L	Unit		D	Pi	repared	Analyzed		Dil Fac
Benzene	<0.00200	U	0.0020	0	mg/Ko	]	_	06/03	3/22 09:28	06/03/22 11:47	,	1
Toluene	<0.00200	U	0.0020	0	mg/Ko	9		06/03	3/22 09:28	06/03/22 11:47	7	1
Ethylbenzene	<0.00200	U	0.0020	0	mg/Ko	9		06/03	3/22 09:28	06/03/22 11:47	,	1
m-Xylene & p-Xylene	<0.00400	U	0.0040	0	mg/Kg	]		06/03	3/22 09:28	06/03/22 11:47	,	1
o-Xylene	<0.00200	U	0.0020	0	mg/Kg	3		06/03	3/22 09:28	06/03/22 11:47	,	1
Xylenes, Total	<0.00400	U	0.0040	0	mg/Kg	9		06/03	3/22 09:28	06/03/22 11:47	,	1
	MB	МВ										
Surrogate	%Recovery		Limits					PI	repared	Analyzed		Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	_					3/22 09:28	06/03/22 11:4		1
1,4-Difluorobenzene (Surr)	91		70 - 130						3/22 09:28	06/03/22 11:4		1
Lab Sample ID: LCS 880-26 Matrix: Solid	788/1-A						С	lient	Sample	ID: Lab Contr Prep Type		
Analysis Batch: 26785										Prep Ba		
Analysis Baton: 20100			Spike	LCS	LCS					%Rec		20100
Analyte			Added		Qualifier	Unit		D	%Rec	Limits		
Benzene			0.100	0.1033		mg/Kg			103	70 - 130		
Toluene			0.100	0.09719		mg/Kg			97	70 - 130		
Ethylbenzene			0.100	0.09928		mg/Kg			99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1964		mg/Kg			98	70 - 130		
o-Xylene			0.100	0.09652		mg/Kg			97	70 - 130		
0	LCS LCS		1 : :4.									
Surrogate	%Recovery Qua	unier	Limits									
4-Bromofluorobenzene (Surr)	95		70 - 130 70 - 130									
1,4-Difluorobenzene (Surr)	102		10-130									
Lab Sample ID: LCSD 880-2	6788/2-A					Cli	ient	Sam	ple ID: L	ab Control Sa	mpl	e Dup
Matrix: Solid										Prep Type		
Analysis Batch: 26785										Prep Ba		
,			Spike	LCSD	LCSD					%Rec		RPD
Analyte			Added		Qualifier	Unit		D	%Rec		RPD	Limit
Benzene			0.100	0.09572		mg/Kg			96	70 - 130	8	35

0.100

0.09046

Ethylbenzene			0.100	0.09188
m-Xylene & p-Xylene			0.200	0.1819
o-Xylene			0.100	0.09004
	LCSD	LCSD		
Surrogate	%Recovery	Qualifier	Limits	
4-Bromofluorobenzene (Surr)	93		70 - 130	

Eurofins Carlsbad

7

8

8

7

70 - 130

70 - 130

70 - 130

70 - 130

90

92

91

90

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Toluene

35

35

35

35

Job ID: 890-2341-1 SDG: 03E1558056

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

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

Lab Sample ID: LCSD 880-2	6788/2-A					Clier	nt Sam	nple ID: I	ab Contro		
Matrix: Solid										ype: To	
Analysis Batch: 26785									Prep	Batch:	26/8
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 890-2351-A	-5-D MS							Client	Sample ID:	: Matrix	Spik
Matrix: Solid									Prep T	ype: To	tal/N
Analysis Batch: 26785									Prep	Batch:	2678
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00201	U	0.100	0.09471		mg/Kg		95	70 - 130		
Toluene	<0.00201	U	0.100	0.08831		mg/Kg		88	70 - 130		
Ethylbenzene	<0.00201	U	0.100	0.08780		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1725		mg/Kg		86	70 - 130		
o-Xylene	<0.00201	U	0.100	0.08523		mg/Kg		85	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	95		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 890-2351-A	-5-E MSD					Cli	ient Sa	ample ID	: Matrix Sp	oike Dup	olica
Matrix: Solid										ype: To	
Analysis Batch: 26785									Prep	Batch:	2678
	Sample	Sample	Spike	MSD	MSD				%Rec		RF
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lin
Benzene	<0.00201	U	0.0998	0.09536		mg/Kg		96	70 - 130	1	
Toluene	<0.00201	U	0.0998	0.08928		mg/Kg		89	70 - 130	1	
Ethylbenzene	<0.00201	U	0.0998	0.08779		mg/Kg		88	70 - 130	0	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1733		mg/Kg		87	70 - 130	0	
p-Xylene	<0.00201	U	0.0998	0.08609		mg/Kg		86	70 - 130	1	
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	101		70 _ 130								
1,4-Difluorobenzene (Surr)	100		70 - 130								

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

Lab Sample ID: MB 880-26433/1- Matrix: Solid Analysis Batch: 26398		МВ				Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	Total/NA
Analyte		MD Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0		50.0	mg/Kg		05/27/22 11:19	05/27/22 21:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/27/22 21:34	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/27/22 11:19	05/27/22 21:34	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130			05/27/22 11:19	05/27/22 21:34	1
o-Terphenyl	119		70 - 130			05/27/22 11:19	05/27/22 21:34	1

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

#### Job ID: 890-2341-1 SDG: 03E1558056

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

Lab Sample ID: LCS 880-264	+33/2-A						Chem	Jampie	D: Lab C		
Matrix: Solid										Type: To	
Analysis Batch: 26398									Prep	Batch:	2643
			Spike		LCS				%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics			1000	1020		mg/Kg		102	70 - 130		
GRO)-C6-C10			1000								
Diesel Range Organics (Over C10-C28)			1000	956.6		mg/Kg		96	70 - 130		
510-028)											
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	101		70 - 130								
o-Terphenyl	100		70 - 130								
Lab Sample ID: LCSD 880-20	6433/3-A					Clie	nt Sam	ple ID:	Lab Contro		
Matrix: Solid										Type: To	
Analysis Batch: 26398									Prep	Batch:	2643
			Spike	LCSD	LCSD				%Rec		RF
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lin
Gasoline Range Organics			1000	928.2		mg/Kg		93	70 - 130	9	
GRO)-C6-C10											
Diesel Range Organics (Over			1000	970.6		mg/Kg		97	70 - 130	1	:
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	104		70 - 130								
-	1-C MS							Client	Sample ID		
Matrix: Solid	1-C MS							Client	Prep 1	: Matrix Type: To Batch:	tal/N
Matrix: Solid		Sample	Spike	MS	MS			Client	Prep 1	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398	Sample	Sample Qualifier	Spike Added		MS Qualifier	Unit	D	Client %Rec	Prep 1 Prep	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics	Sample	Qualifier	-			_ <mark>Unit</mark> mg/Kg	<u> </u>		Prep 1 Prep %Rec	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	Sample Result	Qualifier U	Added	Result			D	%Rec	Prep 1 Prep %Rec Limits	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample Result <50.0 <50.0 MS	Qualifier U U	Added	<b>Result</b> 881.3		mg/Kg	<u>D</u>	<b>%Rec</b> 87	Prep 7 Prep %Rec Limits 70 - 130	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <50.0 <50.0 MS %Recovery	Qualifier U U	Added	<b>Result</b> 881.3		mg/Kg	<u>D</u>	<b>%Rec</b> 87	Prep 7 Prep %Rec Limits 70 - 130	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <50.0 <50.0 MS %Recovery 91	Qualifier U U	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 881.3		mg/Kg	<u>D</u>	<b>%Rec</b> 87	Prep 7 Prep %Rec Limits 70 - 130	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane	Sample Result <50.0 <50.0 MS %Recovery	Qualifier U U	Added	<b>Result</b> 881.3		mg/Kg	<u> </u>	<b>%Rec</b> 87	Prep 7 Prep %Rec Limits 70 - 130	Type: To	tal/N
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl	Sample Result <50.0 <50.0 MS %Recovery 91 87	Qualifier U U	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 881.3		mg/Kg		<b>%Rec</b> 87 80	Prep           %Rec           Limits           70 - 130           70 - 130	Type: To Batch: 	tal/N 2643
Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: 890-2339-A-	Sample Result <50.0 <50.0 MS %Recovery 91 87	Qualifier U U	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 881.3		mg/Kg		<b>%Rec</b> 87 80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch: 	tal/N 2643
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate A-Chlorooctane D-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid	Sample Result <50.0 <50.0 MS %Recovery 91 87	Qualifier U U	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 881.3		mg/Kg		<b>%Rec</b> 87 80	Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130	Dike Dup	blicat
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate (-Chlorooctane D-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid	Sample Result <50.0 <50.0 MS %Recovery 91 87 1-D MSD	Qualifier U MS Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	Result 881.3 803.2	Qualifier	mg/Kg		<b>%Rec</b> 87 80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - Prep 1 Prep 1	Type: To Batch: 	blica tal/N 2643
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid Analysis Batch: 26398	Sample <u>Result</u> <50.0 <50.0 <u>MS</u> <u>%Recovery</u> 91 87 1-D MSD Sample	Qualifier U MS Qualifier Sample	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 Spike	Result 881.3 803.2 MSD	Qualifier	mg/Kg mg/Kg Cl	ient Sa	%Rec 87 80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 - 190	Dike Dup Batch:	blicat tal/N 2643 2643 RF
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid Analysis Batch: 26398 Analyte	Sample <u>Result</u> <50.0 <50.0 <u>MS</u> <u>%Recovery</u> 91 87 1-D MSD Sample Result	Qualifier U MS Qualifier Sample Qualifier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 Spike Added	Result 881.3 803.2 MSD Result	Qualifier	mg/Kg mg/Kg Cl		%Rec 87 80 ample IC	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 %Rec Limits	Dike Dup Batch: Dike Dup Type: To Batch: 	blicat tal/N 2643 tal/N 2643 RP Lim
Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics	Sample <u>Result</u> <50.0 <50.0 <u>MS</u> <u>%Recovery</u> 91 87 1-D MSD Sample	Qualifier U MS Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 Spike	Result 881.3 803.2 MSD	Qualifier	mg/Kg mg/Kg Cl	ient Sa	%Rec 87 80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 - 190	Dike Dup Batch:	blicat tal/N 2643 tal/N 2643 RF Lin
Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid Analysis Batch: 26398 Analyte Basoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample <u>Result</u> <50.0 <50.0 <u>MS</u> <u>%Recovery</u> 91 87 1-D MSD Sample Result	Qualifier U MS Qualifier Qualifier U	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 Spike Added	Result 881.3 803.2 MSD Result	Qualifier	mg/Kg mg/Kg Cl	ient Sa	%Rec 87 80 ample IC	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 %Rec Limits	Dike Dup Batch: Dike Dup Type: To Batch: 	blica 2643 tal/N 2643 RF Lin
Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample           Result           <50.0	Qualifier U MS Qualifier Qualifier U	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added 999	Result           881.3           803.2           MSD           Result           773.2	Qualifier	mg/Kg mg/Kg Cl Unit mg/Kg	ient Sa	%Rec           87           80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Prep 1 Prep %Rec Limits 70 - 130	Dike Dup Type: To Batch: Type: To Batch: <u>RPD</u> 13	blicat tal/N 2643 2643 tal/N 2643 RP Lim 2
Lab Sample ID: 890-2339-A- Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-2339-A- Matrix: Solid Analysis Batch: 26398 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Sample           Result           <50.0	Qualifier U MS Qualifier Qualifier U U MSD	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130 70 - 130 Spike Added 999	Result           881.3           803.2           MSD           Result           773.2	Qualifier	mg/Kg mg/Kg Cl Unit mg/Kg	ient Sa	%Rec           87           80	Prep 1 Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Prep 1 Prep %Rec Limits 70 - 130	Dike Dup Type: To Batch: Type: To Batch: <u>RPD</u> 13	blicat

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

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

Lab Sample ID: 890-2339-A-1-D Matrix: Solid Analysis Batch: 26398	MSD						C	lient S	Sample II		oike Dup ſype: Tot Batch: ∶	tal/NA
	MSD	MSD	1									
Surrogate	%Recovery	Qual		Limits								
o-Terphenyl	83			70 - 130								
/lethod: 300.0 - Anions, Ion	Chromat	ogra	aphy									
- Lab Sample ID: MB 880-26324/1	۱_۵								Client S	Sample ID:	Method	Blank
Matrix: Solid									onone e	-	Type: So	
Analysis Batch: 26501										itop	1900.00	
Analysis Baton. 20001		мв	мв									
Analyte	R	esult	Qualifier		RL	Unit		D	Prepared	Analyz	ed	Dil Fac
Chloride		5.00	U		5.00	mg/Kg	J			05/29/22		1
Lab Sample ID: LCS 880-26324	/2-A							Clier	nt Sample	e ID: Lab Co		
Matrix: Solid										Prep	Type: So	olubl
Analysis Batch: 26501												
				Spike	LCS	LCS				%Rec		
Analyte				Added	Result		Unit	D		Limits		
Chloride				250	255.0		mg/Kg		102	90 - 110		
	A12 A											
Lab Sample ID: LCSD 880-2632	4/ <b>3-</b> A						Clie	ent Sa	mple ID:	Lab Contro	I Sample	e Dup
Lab Sample ID: LCSD 880-2632 Matrix: Solid	4/ <b>3</b> -A						Clie	ent Sa	mple ID:			-
Matrix: Solid	4/J-A						Clie	ent Sa	mple ID:		ol Samplo Type: So	-
	4/ <b>3</b> -A			Spike	LCSD	LCSD	Clie	ent Sa	mple ID:			oluble
Matrix: Solid	4/ <b>3</b> -A			Spike Added		LCSD Qualifier	Clic	ent Sa D	-	Prep		RPE
Matrix: Solid Analysis Batch: 26501 Analyte	4/ <b>3</b> -A					Qualifier			-	Prep %Rec	Type: So	RPC Limi
Matrix: Solid Analysis Batch: 26501 Analyte Chloride				Added	Result	Qualifier	Unit		<b>%Rec</b>	Prep %Rec Limits 90 - 110	Type: So	RPI Limi
Matrix: Solid Analysis Batch: 26501 Analyte Chloride				Added	Result	Qualifier	Unit		<b>%Rec</b>	Prep %Rec Limits 90 - 110	Type: So RPD 1 : Matrix	RPI Limi 20 Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid				Added	Result	Qualifier	Unit		<b>%Rec</b>	Prep %Rec Limits 90 - 110	Type: So	RPI Limi 20 Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B		Sam		Added	Result 257.7	Qualifier	Unit		<b>%Rec</b>	Prep %Rec Limits 90 - 110	Type: So RPD 1 : Matrix	RPE Limi 20 Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid	MS		•	Added 250	Result 257.7 MS	Qualifier	Unit		%Rec 103 Client	Prep %Rec Limits 90 - 110 Sample ID Prep	Type: So RPD 1 : Matrix	RPD Limit 20 Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid Analysis Batch: 26501 Analyte	MS Sample		•	Added 250 Spike	Result 257.7 MS	Qualifier MS Qualifier	<mark>Unit</mark> mg/Kg	<u>D</u>	%Rec 103 Client	Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	Type: So RPD 1 : Matrix	RPI Limi 20 Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid Analysis Batch: 26501 Analyte Chloride	MS Sample Result 58.2		•	Added 250 Spike Added	Result 257.7 MS Result	Qualifier MS Qualifier	Unit mg/Kg Unit mg/Kg	D	%Rec           103           Client           %Rec           98	Prep           %Rec           Limits           90 - 110           Sample ID           Prep           %Rec           Limits           90 - 110	Type: So RPD 1 : Matrix Type: So	Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-C	MS Sample Result 58.2		•	Added 250 Spike Added	Result 257.7 MS Result	Qualifier MS Qualifier	Unit mg/Kg Unit mg/Kg	D	%Rec           103           Client           %Rec           98	Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	Type: So <u>RPD</u> 1 : Matrix Type: So pike Dup	Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-C Matrix: Solid	MS Sample Result 58.2		•	Added 250 Spike Added	Result 257.7 MS Result	Qualifier MS Qualifier	Unit mg/Kg Unit mg/Kg	D	%Rec           103           Client           %Rec           98	Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	Type: So RPD 1 : Matrix Type: So	RPE Limi 20 Spike oluble
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-C	MS Sample Result 58.2	Qual	ifier	Added 250 Spike Added	Result 257.7 MS Result 304.0	Qualifier MS Qualifier	Unit mg/Kg Unit mg/Kg	D	%Rec           103           Client           %Rec           98	Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	Type: So <u>RPD</u> 1 : Matrix Type: So pike Dup	Spike
Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-B Matrix: Solid Analysis Batch: 26501 Analyte Chloride Lab Sample ID: 890-2338-A-1-C Matrix: Solid	MS Sample Result 58.2 MSD	Qual	ifier	Added 250 Spike Added 251	Result 257.7 MS Result 304.0	Qualifier MS Qualifier MSD	Unit mg/Kg Unit mg/Kg	D	%Rec 103 Client %Rec 98 Sample II	Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp Prep	Type: So <u>RPD</u> 1 : Matrix Type: So pike Dup	RPD Limit 20 Spike Dluble

Eurofins Carlsbad

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

# **GC VOA**

#### Datab 26450

)-2341-1 1558056	

90-2346-A-1-E MS     Matrix Spike     Total/NA     Solid     5035       90-2346-A-1-F MSD     Matrix Spike Duplicate     Total/NA     Solid     5035       ep Batch:     26464       ab Sample ID     Client Sample ID     Prep Type     Matrix     Method       90-2341-1     SS01     Total/NA     Solid     5035       90-2341-1     SS01     Total/NA     Solid     5035       80-26464/5-A     Method Blank     Total/NA     Solid     5035       CSB 80-26464/2-A     Lab Control Sample     Total/NA     Solid     5035       CSD 880-26464/2-A     Lab Control Sample Dup     Total/NA     Solid     5035       80-15244-A-5-D MS     Matrix Spike     Total/NA     Solid     5035       80-15244-A-5-E MSD     Matrix Spike Duplicate     Total/NA     Solid     5035       alaysis Batch:     26542       Babo-26464/5-A     Method Blank     Total/NA     Solid     8021B       CS 880-26464/5-A     Method Blank     Total/NA     Solid     8021B     8021B       CS 880-26464/5-A     Lab Control Sample Dup     Total/NA     Solid     8021B       CS 880-26464/5-A     Lab Control Sample Dup     Total/NA     Solid     8021B       CS 880-26464/5-A
CS 880-26459/1-ALab Control SampleTotal/NASolid5035CSD 880-26459/2-ALab Control Sample DupTotal/NASolid503590-2346-A1-1E MSMatrix SpikeTotal/NASolid503590-2346-A1-1F MSDMatrix Spike DuplicateTotal/NASolid503590-2346-A1-1F MSDMatrix Spike DuplicateTotal/NASolid503590-2346-A1-1F MSDClient Sample IDPrep TypeMatrixMethod90-2341-1SS01Total/NASolid503590-2341-1SS01Total/NASolid503518 880-26464/5-AMethod BlankTotal/NASolid503562 808-26464/2-ALab Control Sample DupTotal/NASolid503580-15244-A-5-D MSMatrix SpikeTotal/NASolid503580-15244-A-5-D MSMatrix Spike DuplicateTotal/NASolid503580-26464/5-ALab Control Sample DupTotal/NASolid8021B90-2341-1SS01Total/NASolid8021B90-2341-1SS01Total/NASolid8021B90-2341-1SS01Total/NASolid8021BCS 880-26464/5-ALab Control Sample DupTotal/NASolid8021B90-2341-1SS01Total/NASolid8021BCS 880-26464/5-ALab Control Sample DupTotal/NASolid8021BCS 880-26464/5-ALab Control Sample DupTotal/NASolid8021BCS 880-26464/5-AL
DSD 880-26459/2-A     Lab Control Sample Dup     Total/NA     Solid     5035       30-2346-A-1-E MS     Matrix Spike     Total/NA     Solid     5035       30-2346-A-1-F MSD     Matrix Spike     Total/NA     Solid     5035       30-2346-A-1-F MSD     Matrix Spike Duplicate     Total/NA     Solid     5035       ab Sample ID     Client Sample ID     Prep Type     Matrix     Method       30-2346-A-1-F     SS01     Total/NA     Solid     5035       30-2346-A-1-F     SS01     Total/NA     Solid     5035       ab Sample ID     Client Sample ID     Prep Type     Matrix     Method       30-2346-A/5-A     Method Blank     Total/NA     Solid     5035       S80-26464/1-A     Lab Control Sample Dup     Total/NA     Solid     5035       30-15244-A-5-D MS     Matrix Spike     Total/NA     Solid     5035       30-15244-A-5-E MSD     Matrix Spike Duplicate     Total/NA     Solid     60218       30-2341-1     SS01     Total/NA     Solid     80218     60218       30-2341-1     SS01     Total/NA     Solid     80218       30-2341-1     SS01     Total/NA     Solid     80218       30-2341-1     SS01     Total/NA     Solid
90-2346-A-1-E MS     Matrix Spike     Total/NA     Solid     5035       90-2346-A-1-F MSD     Matrix Spike Duplicate     Total/NA     Solid     5035       ep Batch:     26464       ab Sample ID     Client Sample ID     Prep Type     Matrix     Method       90-2341-1     SS01     Total/NA     Solid     5035       68 80-26464/5-A     Method Blank     Total/NA     Solid     5035       CS8 80-26464/1-A     Lab Control Sample     Total/NA     Solid     5035       CS8 80-26464/2-A     Lab Control Sample Dup     Total/NA     Solid     5035       80.15244-A:5-D MS     Matrix Spike     Total/NA     Solid     5035       80.15244-A:5-E MSD     Matrix Spike     Total/NA     Solid     5035       90-2341-1     SS01     Total/NA     Solid     8021B       CS 880-26464/5-A     Method Blank     Total/NA     Solid     8021B       CS 880-26464/2-A     Lab Control Sample Dup     Total/N
90-2346-A-1-F MSD     Matrix Spike Duplicate     Total/NA     Solid     5035       ep Batch: 26464       ab Sample ID     Client Sample ID     Prep Type     Matrix     Method       90-2341-1     SS01     Total/NA     Solid     5035       18 880-26464/5-A     Method Blank     Total/NA     Solid     5035       CS 880-26464/1-A     Lab Control Sample     Total/NA     Solid     5035       CSD 880-26464/2-A     Lab Control Sample Dup     Total/NA     Solid     5035       Sol15244-A-5-D MS     Matrix Spike     Total/NA     Solid     5035       80-15244-A-5-D MS     Matrix Spike     Total/NA     Solid     5035       sol15244-A-5-D MS     Matrix Spike Duplicate     Total/NA     Solid     5035       sol1244-A-5-D MS     Matrix Spike Duplicate     Total/NA     Solid     8021B       sol25464/1-A     Lab Control Sample ID     Prep Type     Matrix     Method       90-2341-1     SS01     Total/NA     Solid     8021B       880-26464/5-A     Method Blank     Total/NA     Solid     8021B       CSD 880-26464/5-A     Lab Control Sample Dup     Total/NA     Solid     8021B       Sol15244-A-5-D MS     Matrix Spike     Total/NA     Solid     8021B
ab Sample ID       Client Sample ID       Prep Type       Matrix       Method         990-2341-1       SS01       Total/NA       Solid       5035       5035         B8 80-26464/5-A       Method Blank       Total/NA       Solid       5035         CSB 80-26464/1-A       Lab Control Sample       Total/NA       Solid       5035         CSB 80-26464/2-A       Lab Control Sample Dup       Total/NA       Solid       5035         R00-15244-A-5-D MS       Matrix Spike       Total/NA       Solid       5035         R015244-A-5-E MSD       Matrix Spike Duplicate       Total/NA       Solid       5035         R025880-26464/2-A       Lab Control Sample D       Prep Type       Matrix       Method         90-2341-1       SS01       Total/NA       Solid       8021B         R02-26464/5-A       Method Blank       Total/NA       Solid       8021B         CSD 880-26464/5-A       Method Blank       Total/NA       Solid       8021B         CSD 880-26464/2-A       Lab Control Sample Dup       Total/NA       Solid       8021B         CSD 880-26464/2-A       Lab Control Sample Dup       Total/NA       Solid       8021B         800-15244-A-5-D MS
ab sample IDClient Sample IDPrep TypeMatrixMethod90-2341-1SS01Total/NASolid503590-2341-118 880-26464/5-AMethod BlankTotal/NASolid5035CS 880-26464/2-ALab Control SampleTotal/NASolid5035CSD 880-26464/2-ALab Control Sample DupTotal/NASolid503580-15244-A-5-D MSMatrix SpikeTotal/NASolid503580-15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid503580-26464/5-AElient Sample IDPrep TypeMatrixMethod90-2341-1SS01Total/NASolid8021B880-26464/5-AMethod BlankTotal/NASolid8021BCSB 880-26464/1-ALab Control SampleTotal/NASolid8021BCSB 880-26464/1-ALab Control Sample DupTotal/NASolid8021BCSB 880-26464/1-ALab Control Sample DupTotal/NASolid8021BCSB 880-26464/1-ALab Control Sample DupTotal/NASolid8021BCSB 880-26464/1-ALab Control Sa
990-2341-1       SS01       Total/NA       Solid       5035         AB 880-26464/5-A       Method Blank       Total/NA       Solid       5035         CS 880-26464/1-A       Lab Control Sample       Total/NA       Solid       5035         CSD 880-26464/2-A       Lab Control Sample Dup       Total/NA       Solid       5035         R0-15244-A-5-D MS       Matrix Spike       Total/NA       Solid       5035         R0-15244-A-5-E MSD       Matrix Spike Duplicate       Total/NA       Solid       5035         R0-15241-A-5-E MSD       Matrix Spike Duplicate       Total/NA       Solid       5035         R0-26464/5-A       Method Blank       Total/NA       Solid       8021B         R0-26464/5-A       Method Blank       Total/NA       Solid       8021B         R0-26464/5-A       Method Blank       Total/NA       Solid       8021B         CS 880-26464/1-A       Lab Control Sample       Total/NA       Solid       8021B         CS 880-26464/2-A       Lab Control Sample Dup       Total/NA       Solid       8021B         CS 880-26464/2-A       Lab Control Sample Dup       Total/NA       Solid       8021B         R0-15244-A-5-D MS       Matrix Spike       Total/NA       Solid
All 880-26464/5-AMethod BlankTotal/NASolid5035LCS 880-26464/1-ALab Control Sample DupTotal/NASolid5035LCS 880-26464/2-ALab Control Sample DupTotal/NASolid5035180-15244-A-5-D MSMatrix SpikeTotal/NASolid5035180-15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid5035180-15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid5035180-15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid6021B190-2341-1SS01Total/NASolid8021B190-2341-1SS01Total/NASolid8021B105 2880-26464/5-AMethod BlankTotal/NASolid8021B105 2880-26464/1-ALab Control Sample DupTotal/NASolid8021B105 2880-26464/1-ALab Control Sample DupTotal/NASolid8021B105 2880-26464/1-ALab Control Sample DupTotal/NASolid8021B105 15244-A-5-D MSMatrix SpikeTotal/NASolid8021B105 15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid8021B108 15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid8021B109 2341-1SS01Total/NASolidTotal BTEX109 2341-2SS02Total/NASolidTotal BTEX109 2341-3SS03Total/NASolidTotal BTEX
CS 880-26464/1-ALab Control SampleTotal/NASolid5035CSD 880-26464/2-ALab Control Sample DupTotal/NASolid503580-15244-A-5-D MSMatrix SpikeTotal/NASolid503580-15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid5035altysis Batch: 26542ab Sample IDClient Sample IDPrep TypeMatrixMethod90-2341-1SS01Total/NASolid8021BB 880-26464/5-AMethod BlankTotal/NASolid8021BCS 880-26464/1-ALab Control SampleTotal/NASolid8021BCS 880-26464/2-ALab Control SampleTotal/NASolid8021BCS 880-26464/2-ALab Control Sample DupTotal/NASolid8021BCS 880-26464/2-ALab Control Sample DupTotal/NASolid8021BSolidSolid8021BBolidSolid8021BSolidSolid8021BSolidSolid8021BClient Sample DupTotal/NASolid8021BPrep TypeMatrixMethod80-15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid8021BSolidSolid8021BClient Sample IDPrep TypeMatrixMethod90-2341-1SSO1Total
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alysis Batch: 26542ab Sample IDClient Sample IDPrep TypeMatrixMethod90-2341-1SS01Total/NASolid8021B18 880-26464/5-AMethod BlankTotal/NASolid8021BCS 880-26464/1-ALab Control SampleTotal/NASolid8021BCSD 880-26464/2-ALab Control Sample DupTotal/NASolid8021BCSD 880-26464/2-ALab Control Sample DupTotal/NASolid8021Ba0-15244-A-5-D MSMatrix SpikeTotal/NASolid8021B80-15244-A-5-E MSDMatrix Spike DuplicateTotal/NASolid8021Balysis Batch: 26590atrix Spike DuplicateTotal/NASolidTotal BTEX90-2341-1SS01Total/NASolidTotal BTEX90-2341-2SS02Total/NASolidTotal BTEX90-2341-3SS03Total/NASolidTotal BTEX90-2341-4SS04Total/NASolidTotal BTEX
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90-2341-3SS03Total/NASolidTotal BTEX90-2341-4SS04Total/NASolidTotal BTEX
90-2341-4 SS04 Total/NA Solid Total BTEX
nalysis Batch: 26715
ab Sample ID Prep Type Matrix Method
90-2341-2 SS02 Total/NA Solid 8021B
B 880-26459/5-A Method Blank Total/NA Solid 8021B
CS 880-26459/1-A Lab Control Sample Total/NA Solid 8021B
CSD 880-26459/2-A Lab Control Sample Dup Total/NA Solid 8021B
90-2346-A-1-E MS Matrix Spike Total/NA Solid 8021B
20-2346-A-1-F MSD Matrix Spike Duplicate Total/NA Solid 8021B
alysis Batch: 26785
ab Sample ID Client Sample ID Prep Type Matrix Method
90-2341-3 SS03 Total/NA Solid 8021B
90-2341-4 SS04 Total/NA Solid 8021B
CS 880-26788/1-A Lab Control Sample Total/NA Solid 8021B
.CS 880-26788/1-A Lab Control Sample Total/NA Solid 8021B

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

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#### Job ID: 890-2341-1 SDG: 03E1558056

**GC VOA** 

# Prep Batch: 26788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2341-3	SS03	Total/NA	Solid	5035	
890-2341-4	SS04	Total/NA	Solid	5035	
MB 880-26788/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-26788/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-26788/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2351-A-5-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2351-A-5-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# GC Semi VOA

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2341-1	SS01	Total/NA	Solid	8015B NM	26433	
890-2341-2	SS02	Total/NA	Solid	8015B NM	26433	
890-2341-3	SS03	Total/NA	Solid	8015B NM	26433	
890-2341-4	SS04	Total/NA	Solid	8015B NM	26433	
MB 880-26433/1-A	Method Blank	Total/NA	Solid	8015B NM	26433	
LCS 880-26433/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	26433	
LCSD 880-26433/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	26433	13
890-2339-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	26433	
890-2339-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	26433	

#### Prep Batch: 26433

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2341-1	SS01	Total/NA	Solid	8015NM Prep	
890-2341-2	SS02	Total/NA	Solid	8015NM Prep	
890-2341-3	SS03	Total/NA	Solid	8015NM Prep	
890-2341-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-26433/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-26433/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-26433/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2339-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2339-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 26554

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2341-1	SS01	Total/NA	Solid	8015 NM	
890-2341-2	SS02	Total/NA	Solid	8015 NM	
890-2341-3	SS03	Total/NA	Solid	8015 NM	
890-2341-4	SS04	Total/NA	Solid	8015 NM	

# HPLC/IC

#### Leach Batch: 26324

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2341-1	SS01	Soluble	Solid	DI Leach	
890-2341-2	SS02	Soluble	Solid	DI Leach	
890-2341-3	SS03	Soluble	Solid	DI Leach	
890-2341-4	SS04	Soluble	Solid	DI Leach	
MB 880-26324/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-26324/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-26324/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

# HPLC/IC (Continued)

# Leach Batch: 26324 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2338-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2338-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 26501

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-2341-1	SS01	Soluble	Solid	300.0	26324	
890-2341-2	SS02	Soluble	Solid	300.0	26324	
890-2341-3	SS03	Soluble	Solid	300.0	26324	8
890-2341-4	SS04	Soluble	Solid	300.0	26324	
MB 880-26324/1-A	Method Blank	Soluble	Solid	300.0	26324	9
LCS 880-26324/2-A	Lab Control Sample	Soluble	Solid	300.0	26324	
LCSD 880-26324/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	26324	
890-2338-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	26324	
890-2338-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	26324	
						13

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Job ID: 890-2341-1 SDG: 03E1558056

Project/Site: BEU 5E Han Solo 105H

Job ID: 890-2341-1 SDG: 03E1558056

# Lab Sample ID: 890-2341-1

Lab Sample ID: 890-2341-2

Lab Sample ID: 890-2341-3

Lab Sample ID: 890-2341-4

Date Collected: 05/24/22 13:30 Date Received: 05/25/22 14:24

**Client Sample ID: SS01** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	26464	05/27/22 15:07	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	26542	05/31/22 14:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26590	05/31/22 15:29	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26554	05/31/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26433	05/27/22 11:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26398	05/28/22 01:11	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	26324	05/27/22 12:50	SC	XEN MID
Soluble	Analysis	300.0		1			26501	05/29/22 23:08	SC	XEN MID

# **Client Sample ID: SS02**

# Date Collected: 05/24/22 13:35

Date Received: 05/25/22 14:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	26459	05/27/22 14:42	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	26715	06/02/22 21:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26590	05/31/22 15:29	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26554	05/31/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	26433	05/27/22 11:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26398	05/28/22 01:32	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	26324	05/27/22 12:50	SC	XEN MID
Soluble	Analysis	300.0		1			26501	05/29/22 23:15	SC	XEN MID

# **Client Sample ID: SS03**

# Date Collected: 05/24/22 13:40

Date Received: 05/25/22 14:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	26788	06/03/22 09:28	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	26785	06/03/22 16:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26590	05/31/22 15:29	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26554	05/31/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	26433	05/27/22 11:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26398	05/28/22 01:54	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	26324	05/27/22 12:50	SC	XEN MID
Soluble	Analysis	300.0		5			26501	05/29/22 23:21	SC	XEN MID

#### **Client Sample ID: SS04** Date Collected: 05/24/22 13:50 Date Received: 05/25/22 14:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	26788	06/03/22 09:28	MR	XEN MID
Total/NA	Analysis	8021B		1	0 mL	1.0 mL	26785	06/03/22 17:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26590	05/31/22 15:29	SM	XEN MID

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Matrix: Solid

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# Matrix: Solid

Matrix: Solid

Matrix: Solid

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Job ID: 890-2341-1

SDG: 03E1558056

Matrix: Solid

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Lab Sample ID: 890-2341-4

# Lab Chronicle

Client: Ensolum Project/Site: BEU 5E Han Solo 105H

# Client Sample ID: SS04

Date Collected: 05/24/22 13:50 Date Received: 05/25/22 14:24

	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			26554	05/31/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26433	05/27/22 11:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26398	05/28/22 02:16	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	26324	05/27/22 12:50	SC	XEN MID
Soluble	Analysis	300.0		1			26501	05/29/22 23:27	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

		Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: BEU 5E H	an Solo 105H			Job ID: 890-2341-1 SDG: 03E1558056	2
Laboratory: Eurofi					
Unless otherwise noted, all a	nalytes for this laborator	ry were covered under each acc	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-21-22	06-30-22	5
The following analytes	are included in this repo	rt, but the laboratory is not certif	fied by the governing authority. This list ma	ay include analytes for which	5
the agency does not off					
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					11
					13

Eurofins Carlsbad

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Job ID: 890-2341-1 SDG: 03E1558056

Project/Site: E	BEU 5E Han Solo 105H		SDG: 03E155
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

#### Protocol References:

8015NM Prep

DI Leach

Client: Ensolum

ASTM = ASTM International

Microextraction

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

Deionized Water Leaching Procedure

#### Laboratory References:

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

XEN MID

XEN MID

SW846

ASTM

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8	
9	
11	
13	

Client: Ensolum Project/Site: BEU 5E Han Solo 105H Job ID: 890-2341-1 SDG: 03E1558056

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-2341-1	SS01	Solid	05/24/22 13:30	05/25/22 14:24	0.5'	
890-2341-2	SS02	Solid	05/24/22 13:35	05/25/22 14:24	0.5'	
890-2341-3	SS03	Solid	05/24/22 13:40	05/25/22 14:24	0.5'	
890-2341-4	SS04	Solid	05/24/22 13:50	05/25/22 14:24	0.5'	
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Project Manager: Be	Ben Belill			Bill to: (if different)	ont)	Adrian Baker	aker		Work Order Comments	Comments
	Ensolum LLC.			Company Name:	ne:	XTO Energy, Inc	rgy, Inc.		Program: UST/PST   PRP Brow	] PRP 🗌 Brownfields 🗌 RRC 🔲 Superfund 🗌
				Address:		3104 E.	3104 E. Green Street	iţ		
City, State ZIP:				City, State ZIP:	. 7	Carlsbac	Carlsbad, NM 88220	)	Reporting: Level II Level III PST/UST TRRP	
	989.854.0852		Email:	bbelill@ensolum.com	lum.con				Deliverables: EDD ADaPT	T Other:
Project Name:	BEU 5E Han Solo 105H	lo 105H	Turn	Turn Around				ANALYSIS REQUEST	UEST	Preservative Codes
Project Number:	03E1558056	56	Routine	Rush	Pres. Code					None: NO DI Water: H <sub>2</sub> O
Project Location:			Due Date:							Cool: Cool MeOH: Me
Sampler's Name:	Conner Shore	ore	TAT starts the	TAT starts the day received by	*		-			HCL: HC HNO3: HN
PO #		)	the lab, if rece	the lab, if received by 4:30pm				11.		H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No	nete	.0)	1			H3PO4: HP
Samples Received Intact:		Thermometer ID:	er ID:	21210	1	300				NaHSO4: NABIS
Cooler Custody Seals:	Yes No (N/A		actor:	10.2		PA:	+			Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:			Reading:	3.S		S (E		890-234		Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	emperature:	3.0				Chain of UNIN		NaOH+Ascorbic Acid: SAPC
Sample Identification	cation Matrix	, Date Sampled	Time Sampled	Depth Grab/ Comp	p Cont	CHLOR	TPH (8) BTEX (	Custoqy		Sample Comments
SS01	s	05.24.22	1330	0.5' G		×				Incident ID: nAPP2209731445
SS02	s	05.24.22	1335	0.5' G		×	×			
SS03	s	05.24.22	1340	0.5' G		×	××			Cost Center:
SS04	S	05.24.22	1350	0.5' G		×	×			AFE
	/									
$\leq$										
				-			+			
				-						
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020: Metal(s) to be anal-		8RCRA 13PPM TCLP / SPLP	TCLP / SPLP 6010: 8RCRA	1 AI S	Sb As E	As Ba Be B As Ba Be (	3 Cd Ca Cr Co Cu Fe Pb Cd Cr Co Cu Pb Mn Mo N	MoNiSeAgTIU Hg:1631/2	kg SiO <sub>2</sub> Na Sr TI Sn U V Zn Hg: 1631/245.1/7470/7471
lotice: Signature of this docu	ument and relinquishmen III be liable only for the c	t of samples con	stitutes a valid p nd shall not assu	urchase order fro me anv responsi	om client c blilty for a	ompany to	Eurofins Xe	co, its affiliates and subcontractors. curred by the client if such losses ar	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control	
of Eurofins Xenco. A minimu	m charge of \$85.00 will b	e applied to each	project and a ch	arge of \$5 for each	ch sample	submitted	to Eurofins	enco, but not analyzed. These terms	of Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be emored unless previously negotiated and the second	
Relinquished by: (Signature)	signature)	NReceived by:	d by: (Signature)	ure)		Date/Time	me	Relinquished by: (Signature)	Ire) Received by: (Signature)	ure) Date/Time
		Close	Carl	7	5	5.25.20	1 1	Ē		
N		Core	Charl	7	5	2	23		142	

5

12 13

Chain of Custody

Job Number: 890-2341-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2341 List Number: 1 Creator: Stutzman, Amanda

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

N/A

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

14

Job Number: 890-2341-1 SDG Number: 03E1558056

List Source: Eurofins Midland

List Creation: 05/27/22 10:54 AM

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2341 List Number: 2 Creator: Rodriguez, Leticia

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

Received by OCD: 8/19/2022 11:50:23 AM

LINKS

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# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2588-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 10:28:27 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com of 256

13 14

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

SDG: 03E1558056

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Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin)

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

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent Positive / Present

Presumptive Quality Control

Method Quantitation Limit

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

DL

DLC

EDL

LOD

LOQ MCL

MDA

MDC

MDL

ML MPN

MQL

NC

ND

NEG

POS

PQL PRES

QC RER

RL

RPD

TEF TEQ

TNTC

DL, RA, RE, IN

eived by O	CD: 8/19/2022 11:50:23 AM	Page 62 of 2
	Definitions/Glossary	
Client: Ensol Project/Site:	lum BEU 5E HAN SOLO 105H	Job ID: 890-2588-1 SDG: 03E1558056
Qualifiers		
GC VOA Qualifier	Qualifier Description	
=1	MS and/or MSD recovery exceeds control limits.	
=2	MS/MSD RPD exceeds control limits	
J	Indicates the analyte was analyzed for but not detected.	
GC Semi VC	A	
Qualifier	Qualifier Description	
61-	Surrogate recovery exceeds control limits, low biased.	
51+	Surrogate recovery exceeds control limits, high biased.	
J	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
J	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
I	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	

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

Job ID: 890-2588-1 SDG: 03E1558056

#### Job ID: 890-2588-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2588-1

#### Receipt

The sample was received on 7/19/2022 3:58 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30263 and analytical batch 880-30484 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30312 and analytical batch 880-30251 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30312/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: SS05 (890-2588-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

rage 05 0J

Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2588-1 SDG: 03E1558056

Matrix: Solid

Lab Sample ID: 890-2588-1

# **Client Sample ID: SS05**

Date Collected: 07/19/22 13:25 Date Received: 07/19/22 15:58

Sample Depth: 0.5

Client: Ensolum

Chloride

Method: 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier Unit D Prepared Analyzed Dil Fac RL <0.00200 U F2 F1 07/21/22 13:27 07/25/22 01:28 Benzene 0.00200 mg/Kg Toluene <0.00200 UF1 0.00200 mg/Kg 07/21/22 13:27 07/25/22 01:28 Ethylbenzene 0.00200 07/21/22 13:27 07/25/22 01:28 <0.00200 U F2 F1 mg/Kg m-Xylene & p-Xylene <0.00399 U F2 F1 0.00399 07/21/22 13:27 07/25/22 01:28 mg/Kg o-Xylene <0.00200 U F2 F1 0.00200 mg/Kg 07/21/22 13:27 07/25/22 01:28 Xylenes, Total <0.00399 U F2 F1 0.00399 mg/Kg 07/21/22 13:27 07/25/22 01:28 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 96 70 - 130 07/21/22 13:27 07/25/22 01:28 4-Bromofluorobenzene (Surr) 81 70 - 130 07/21/22 13:27 07/25/22 01:28 1,4-Difluorobenzene (Surr) Method: Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac 0.00399 Total BTEX <0.00399 U mg/Kg 07/25/22 10:43 1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Total TPH	<50.0	U	50.0	mg/Kg			07/22/22 11:07	1		

Analyte	Beault	Qualifier	RL	Unit	D	Prepared	Analyzad	Dil Fac
Analyte	Result	Quaimer				Frepareu	Analyzed	DIFAC
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/21/22 17:20	07/22/22 09:09	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/21/22 17:20	07/22/22 09:09	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/21/22 17:20	07/22/22 09:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	28	S1-	70 - 130			07/21/22 17:20	07/22/22 09:09	1
o-Terphenyl	26	S1-	70 - 130			07/21/22 17:20	07/22/22 09:09	1
_ Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

5.02

mg/Kg

192

**Eurofins Carlsbad** 

07/25/22 00:02

5

1

1

1

1

1

1

Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2588-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Type: Total/NA

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

Matrix: Solid

Client: Ensolum

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
.ab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2588-1	SS05	96	81	
390-2588-1 MS	SS05	124	86	
890-2588-1 MSD	SS05	96	94	
LCS 880-30263/1-A	Lab Control Sample	107	93	
_CSD 880-30263/2-A	Lab Control Sample Dup	105	92	
MB 880-30263/5-A	Method Blank	103	84	
MB 880-30478/5-A	Method Blank	98	86	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
ample ID	Client Sample ID	(70-130)	(70-130)	
68-A-41-D MS	Matrix Spike	84	83	
68-A-41-E MSD	Matrix Spike Duplicate	85	84	
88-1	SS05	28 S1-	26 S1-	
-30312/2-A	Lab Control Sample	135 S1+	142 S1+	
380-30312/3-A	Lab Control Sample Dup	116	127	
80-30312/1-A	Method Blank	128	146 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

Lab Sample ID: MB 880-30263/5-A Matrix: Solid Analysis Batch: 30484	4					Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	Total/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/21/22 13:27	07/25/22 01:06	1
1,4-Difluorobenzene (Surr)	84		70 - 130			07/21/22 13:27	07/25/22 01:06	1
Lab Sample ID: LCS 880-30263/1	A				c	lient Sample I	D: Lab Control	Sample

#### Lab Sample ID: LCS 880-30263/1-A Matrix: Solid

# Analysis Batch: 30484

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.100	0.1021		mg/Kg		102	70 - 130
Toluene	0.100	0.1045		mg/Kg		104	70 - 130
Ethylbenzene	0.100	0.1094		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	0.200	0.2212		mg/Kg		111	70 - 130
o-Xylene	0.100	0.1237		mg/Kg		124	70 - 130

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

# Lab Sample ID: LCSD 880-30263/2-A

# Matrix: Solid

Analysis Batch: 30484							Prep	Batch:	30263
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08838		mg/Kg		88	70 - 130	14	35
Toluene	0.100	0.09280		mg/Kg		93	70 - 130	12	35
Ethylbenzene	0.100	0.09635		mg/Kg		96	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1949		mg/Kg		97	70 - 130	13	35
o-Xylene	0.100	0.1089		mg/Kg		109	70 - 130	13	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

#### Lab Sample ID: 890-2588-1 MS Matrix: Solid

# Analysis Batch: 30484

Analysis Batch: 30484									Prep	Batch: 30263
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F2 F1	0.100	0.02542	F1	mg/Kg		25	70 - 130	
Toluene	<0.00200	U F1	0.100	0.03588	F1	mg/Kg		34	70 - 130	

**Eurofins Carlsbad** 

Client Sample ID: SS05

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Batch: 30263

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 890-2588-1 M	NS										Client San	- Contra - C	
Matrix: Solid												ype: To	
Analysis Batch: 30484											Prep	Batch:	3026
	Sample	Sam	ple	Spike	MS	MS					%Rec		
Analyte	Result	Qual	ifier	Added	Result	Qualifier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00200	U F2	F1	0.100	0.04162	F1	mg/Kg			41	70 - 130		
m-Xylene & p-Xylene	<0.00399	U F2	F1	0.200	0.08704	F1	mg/Kg			43	70 - 130		
o-Xylene	<0.00200	U F2	F1	0.100	0.05151	F1	mg/Kg			51	70 _ 130		
	MS	MS											
Surrogate	%Recovery	Qual	ifier	Limits									
4-Bromofluorobenzene (Surr)	124			70 - 130									
1,4-Difluorobenzene (Surr)	86			70 - 130									
Lab Sample ID: 890-2588-1 M	MSD										Client San	nple ID:	: SS(
Matrix: Solid												ype: To	
Analysis Batch: 30484												Batch:	
	Sample	Sam	ple	Spike	MSD	MSD					%Rec		RP
Analyte	Result			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Benzene	<0.00200			0.0990	0.01645	F2 F1	mg/Kg		_	17	70 - 130	43	3
Toluene	<0.00200	U F1		0.0990	0.02796	F1	mg/Kg			27	70 - 130	25	;
Ethylbenzene	<0.00200		F1	0.0990	0.02785		mg/Kg			27	70 - 130	40	3
m-Xylene & p-Xylene	<0.00399			0.198	0.05748		mg/Kg			28	70 - 130	41	
o-Xylene	<0.00200			0.0990	0.03580		mg/Kg			36	70 - 130	36	:
	MSD	MSD											
Surrogate	%Recovery	Qual	ifier	Limits									
4-Bromofluorobenzene (Surr)	96			70 - 130									
1,4-Difluorobenzene (Surr)	94			70 - 130									
Lab Sample ID: MB 880-3047	78/5-A									Client S	ample ID: I	Nethod	Blan
Matrix: Solid												ype: To	
Analysis Batch: 30484												Batch:	
		мв	МВ										
Analyte	R	esult	Qualifier	RI	L	Unit		D	Pi	repared	Analyz	əd	Dil Fa
Benzene			U	0.00200		mg/K		_		3/22 18:30	07/24/22 1		
Toluene			U	0.00200		mg/K	-			3/22 18:30	07/24/22 1		
Ethylbenzene		0200		0.00200		mg/K	-			3/22 18:30	07/24/22 1		
m-Xylene & p-Xylene		0400		0.00400		mg/k				3/22 18:30	07/24/22 1		
o-Xylene		0200		0.00200		mg/k				3/22 18:30	07/24/22 1		
Xylenes, Total		0400		0.00400		mg/K	-			3/22 18:30	07/24/22 1		
		ΜВ	ΜΒ										
Surrogate	%Reco	very	Qualifier	Limits	_				PI	repared	Analyz	ed	Dil Fa
-		98		70 - 130	-				07/2	3/22 18:30	07/24/22 1	14:29	
4-Bromofluorobenzene (Surr)		90		10 - 100									

Lab Sample ID: MB 880-30312/1-A Matrix: Solid Analysis Batch: 30251						Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batcl	Total/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/21/22 17:20	07/22/22 00:07	1
(GRO)-C6-C10								

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

# Method: 8015B NM - Di

Nethod: 8015B NM - Diesel F	Range Or	gan	nics (DR	O) (GC) (Co	ntinue	ed)									
Lab Sample ID: MB 880-30312/1- Matrix: Solid Analysis Batch: 30251											Client Sa	ample ID: M Prep Ty Prep I		tal/NA	
Analyte	Re	MB	MB Qualifier	RL		u	Init		D	Pr	epared	Analyze	Ч	Dil Fac	
Diesel Range Organics (Over			U				ng/Kg		_		1/22 17:20	07/22/22 0		1	
C10-C28)							5 5								
Oll Range Organics (Over C28-C36)	<	50.0	U	50.0		m	ng/Kg			07/21	1/22 17:20	07/22/22 0	0:07	1	
		ΜВ	мв												
Surrogate	%Reco		Qualifier	Limits						Pr	repared	Analyze	d	Dil Fac	
1-Chlorooctane		128		70 - 130							1/22 17:20	07/22/22 0		1	
o-Terphenyl		146	S1+	70 - 130							1/22 17:20	07/22/22 0		1	
-															
Lab Sample ID: LCS 880-30312/2	-A								C	lient	Sample	ID: Lab Co			
Matrix: Solid												Prep Ty	-		
Analysis Batch: 30251													Batch:	30312	
				Spike		LCS						%Rec			
Analyte				Added		Qualifie	er	Unit		<u>D</u>	%Rec	Limits			
Gasoline Range Organics				1000	880.1			mg/Kg			88	70 - 130			
(GRO)-C6-C10 Diesel Range Organics (Over				1000	1131			mg/Kg			113	70 - 130			
C10-C28)				1000	1151			mg/rtg			115	70 - 150			
,	LCS														
Surrogate	%Recovery	Qual	lifior	Limits											
1-Chlorooctane		S1+		70 - 130											
o-Terphenyl	142			70 - 130											
- -	142	07.		10-100											
Lab Sample ID: LCSD 880-30312	/ <b>3-A</b>							Cli	ent	Sam	ple ID: L	ab Control	Samp	e Dup	
Matrix: Solid												Prep Ty	pe: To	tal/NA	
Analysis Batch: 30251												Prep l	Batch:	30312	
				Spike	LCSD	LCSD						%Rec		RPD	
Analyte				Added	Result	Qualifie	er	Unit		D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics				1000	807.8			mg/Kg			81	70 - 130	9	20	
(GRO)-C6-C10															
Diesel Range Organics (Over				1000	996.6			mg/Kg			100	70 - 130	13	20	
C10-C28)															
	LCSD	LCS	D												
Surrogate	%Recovery	Qual	lifier	Limits											
1-Chlorooctane	116			70 - 130											
o-Terphenyl	127			70 - 130											

# Lab Sample ID: 880-17068-A-41-D MS Matrix: Solid

Matrix: Solid Analysis Batch: 30251										Type: Total b Batch: 30	
	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	907.6		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	796.3		mg/Kg		80	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	83		70 - 130

**Eurofins Carlsbad** 

**Client Sample ID: Matrix Spike** 

Job ID: 890-2588-1

SDG: 03E1558056

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Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2588-1 SDG: 03E1558056

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

Matrix: Solid	-41-E MSD						ient Jo		): Matrix S		
										Type: To	
Analysis Batch: 30251	Somela	Sampla	Spike	MED	MOD					Batch:	SUS12 RPD
Anglista		Sample Qualifier	Spike		MSD Ovelifier	11	<b>_</b>		%Rec	000	
Analyte			Added	Result	Qualifier	Unit	<u>D</u>	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)-C6-C10	<50.0	0	999	917.2		mg/Kg		89	70 - 130	1	20
Diesel Range Organics (Over	<50.0	U	999	807.5		mg/Kg		81	70 - 130	1	20
C10-C28)	-00.0	0	000	001.0		iiig/itg		01	10-100		2
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	85		70 - 130								
o-Terphenyl	84		70 - 130								
lethod: 300.0 - Anions, Lab Sample ID: MB 880-3024 Matrix: Solid Analysis Batch: 30486		ography						Client S	ample ID: Prep	Method Type: S	
		МВ МВ									
Analyte		esult Qualifier			Unit		<u>Р</u>	repared	Analyz		Dil Fa
Chloride	<	<5.00 U		5.00	mg/K	g			07/24/22	23:00	
Matrix: Solid									Pren	IVDe: 5	OUIDI
			Spike	LCS	LCS				Prep %Rec	Type: S	olubi
Analysis Batch: 30486			Spike Added		LCS Qualifier	Unit	D	%Rec		Type: 5	OIUDI
Analysis Batch: 30486			-			<mark>Unit</mark>	D	<b>%Rec</b>	%Rec		
Analysis Batch: 30486 Analyte Chloride			Added	Result		mg/Kg		106	%Rec Limits 90 - 110		
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30	 0245/3-A		Added	Result		mg/Kg		106	%Rec Limits 90 - 110		le Duj
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3 Matrix: Solid	0245/3-A		Added	Result		mg/Kg		106	%Rec Limits 90 - 110		le Duj
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3 Matrix: Solid	 0245/3-A		Added 250	Result 264.1	Qualifier	mg/Kg		106	%Rec Limits 90 - 110 Lab Contro Prep		le Duj olubl
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486	 0245/3-A		Added 250 Spike	Result 264.1 LCSD	Qualifier	mg/Kg		106	%Rec Limits 90 - 110 Lab Contro Prep %Rec	ol Samp Type: S	le Duj oluble RPI
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte	 0245/3-A		Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clies		106 nple ID: I %Rec	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits		le Duj olubi RPi Lim
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte	 0245/3-A 		Added 250 Spike	Result 264.1 LCSD	Qualifier	mg/Kg		106	%Rec Limits 90 - 110 Lab Contro Prep %Rec	DI Samp Type: S 	le Duj oluble RPI Limi
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clies		106 <b>aple ID: I</b> <b>%Rec</b> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	DI Samp Type: S 	le Duj olubl RPI Lim 2
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-34 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clies		106 <b>aple ID: I</b> <b>%Rec</b> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	DI Sampl Type: S RPD 1 : Matrix	le Duj olubl RPI Lim 2 Spike
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-36 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clies		106 <b>aple ID: I</b> <b>%Rec</b> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	DI Samp Type: S 	le Duj soluble RPI Limi 20 Spike
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-34 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A			Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5	Qualifier	mg/Kg Clies		106 <b>aple ID: I</b> <b>%Rec</b> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	DI Sampl Type: S RPD 1 : Matrix	le Duj soluble RPI Limi 20 Spike
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analysis Batch: 30486		Sample Qualifier	Added 250 Spike Added 250 Spike	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier MS	Unit mg/Kg		106 nple ID: I %Rec 106 Client	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	DI Sampl Type: S RPD 1 : Matrix	le Duj soluble RPI Limi 20 Spike
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analysis Batch: 30486 Analyte		Sample Qualifier	Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier	mg/Kg Clies	 	106 <b>aple ID: I</b> <b>%Rec</b> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	DI Sampl Type: S RPD 1 : Matrix	le Duj solubi Lim 2 Spike
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-34 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid	A-1-B MS Sample Result 948	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS	Unit mg/Kg	D	106 nple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	ol Samp Type: S <u>RPD</u> 1 2: Matrix Type: S	le Du olubi RP Lim 2 Spik olubi
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-34 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid	A-1-B MS Sample Result 948	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg	D	106 nple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	ol Samp Type: S <u>RPD</u> 1 9: Matrix Type: S 	le Du olubi RPI Lim 2 Spik olubi
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-34 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid	A-1-B MS Sample <u>Result</u> 948 A-1-C MSD	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier MS	Unit mg/Kg	D	106 nple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	ol Samp Type: S <u>RPD</u> 1 9: Matrix Type: S 	le Duj coluble RPI Lim 2 Spike coluble
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-36 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid	A-1-B MS Sample Result 948 A-1-C MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg	D	106 nple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 0: Matrix Sp Prep	ol Samp Type: S <u>RPD</u> 1 9: Matrix Type: S 	le Dup coluble Limi 20 Spike coluble

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Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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Job ID: 890-2588-1 SDG: 03E1558056

# **GC VOA**

# Prep Batch: 30263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2588-1	SS05	Total/NA	Solid	5035	
MB 880-30263/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2588-1 MS	SS05	Total/NA	Solid	5035	
890-2588-1 MSD	SS05	Total/NA	Solid	5035	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 880-30478/5-A	Method Blank	Total/NA	Solid	5035	

#### Analysis Batch: 30484

Prep Batch: 30478						8
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
MB 880-30478/5-A	Method Blank	Total/NA	Solid	5035		9
Analysis Batch: 30484 _						10
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2588-1	SS05	Total/NA	Solid	8021B	30263	
MB 880-30263/5-A	Method Blank	Total/NA	Solid	8021B	30263	
MB 880-30478/5-A	Method Blank	Total/NA	Solid	8021B	30478	
LCS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	8021B	30263	
LCSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30263	40
890-2588-1 MS	SS05	Total/NA	Solid	8021B	30263	13
890-2588-1 MSD	SS05	Total/NA	Solid	8021B	30263	

#### Analysis Batch: 30551

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2588-1	SS05	Total/NA	Solid	Total BTEX	

# GC Semi VOA

#### Analysis Batch: 30251

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2588-1	SS05	Total/NA	Solid	8015B NM	30312
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015B NM	30312
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30312
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30312
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30312
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30312

#### Prep Batch: 30312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2588-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2588-1	SS05	Total/NA	Solid	8015 NM	

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

HPLC/IC

# Leach Batch: 30245

ib Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2588-1	SS05	Soluble	Solid	DI Leach	
/IB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
CSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
380-17194-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
380-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 30486					
.ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
an Sample ID					
	SS05	Soluble	Solid	300.0	30245
390-2588-1	· · · · · · · · · · · · · · · · · · ·		Solid	300.0 300.0	30245 30245
390-2588-1 MB 880-30245/1-A	SS05	Soluble			
390-2588-1 MB 880-30245/1-A LCS 880-30245/2-A	SS05 Method Blank	Soluble	Solid	300.0	30245
280 5877976 10 390-2588-1 MB 880-30245/1-A _CS 880-30245/2-A _CSD 880-30245/3-A 380-17194-A-1-B MS	SS05 Method Blank Lab Control Sample	Soluble Soluble Soluble	Solid Solid	300.0 300.0	30245 30245

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2588-1	SS05	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30245
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

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Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2588-1 SDG: 03E1558056

# Lab Sample ID: 890-2588-1 Matrix: Solid

Client Sample ID: SS05 Date Collected: 07/19/22 13:25 Date Received: 07/19/22 15:58

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30263	07/21/22 13:27	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30484	07/25/22 01:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30551	07/25/22 10:43	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30386	07/22/22 11:07	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30312	07/21/22 17:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30251	07/22/22 09:09	SM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 00:02	СН	XEN MID

#### Laboratory References:

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

Eurofins Carlsbad

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# Accreditation/Certification Summary

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Client: Ensolum Project/Site: BEU 5E ⊢	IAN SOLO 105H			Job ID: 890-2588-1 SDG: 03E1558056	2
Laboratory: Eurof	ins Midland	ere covered under each acc	reditation/certification below.		
Authority	P	rogram	Identification Number	Expiration Date	
Texas	N	ELAP	T104704400-22-24	06-30-23	5
The following analytes the agency does not of		ut the laboratory is not certif	fied by the governing authority. This list ma	ay include analytes for which	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM	· ·	Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					11
					13
					14

# Job ID: 890-2588-1 SDG: 03E1558056

lethod	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
otal BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
00.0	Anions, Ion Chromatography	MCAWW	XEN MID
6035	Closed System Purge and Trap	SW846	XEN MID
015NM Prep	Microextraction	SW846	XEN MID
I Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

# Protocol References:

Client: Ensolum

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**

Job ID: 890-2588-1 SDG: 03E1558056

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2588-1	SS05	Solid	07/19/22 13:25	07/19/22 15:58	0.5

Manto     Eliment XI region 344, Lausen, X		Environ	Environment Testing	0.0	Midk	and, TX (4	32) 704-544	4200, Dai 0, San An	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	2-0300 509-3334	-	Work Order No:	ir No:		
Bellin         Bellin         Bill Er, (i dimenti)         Dantet Green         Anno. Control Creen         Anno. Control Creen<		Xenco			ЧЧ	Paso, TX bbs, NM (	(915) 585-5 175) 392-75	443, Lubb 50, Carlsb	ock, TX (806) ; ad, NM (575) §	94-1296 88-3199				5 	*
Manager         Bell         Carrent Green         Manager         Perioding         Free microscol         Manager         Perioding         Manager         Manager         Manager         Manager         Manager         Manager         Manager         Perioding         Manager												WWW.XEIIC	o.com raye	-	-
Wytanse Breckultur, LLC     Company Name: 21/22 National JMN 82/22     Company Name: 21/22 National JMN 82/27     Program UST ADDF1     Program UST Program UST ADDF1       Im 21. Victorial JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Im 21. Victorial JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Im 21. Victorial JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Im 21. Victorial JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Im 21. Victorial JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Immer     EEU X     20/14 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Immer     EEU X     20/14 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Immer     EEU X     20/14 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Immer     EEU X     20/14 National JMN 82/27     21/22 National JMN 82/27     21/22 National JMN 82/27       Immer     EEU X     20/14 National JMN 92/27     21/22 National JMN 92/27     21/22 National JMN 92/27       Immer     EEU X     20/14 National JMN 92/27     21/22 National JMN 92/27     21/22	roject Manager:	Ben Belil		Ē	Il to: (if diffe	ent)	Garrett G	eeu		T		WORK	raer comments	1.	
Br.     3122 National parks Hwy     Joiness:     3141 of Project:       Bio.21P     Caretabal MM 882200     Email Ibuility Caretal     Caretabal MM 88220       Bio.21P     Caretabal MM 882200     Email Ibuility Caretal     Caretabal MM 88220       Nomin     EEU SE HAN SOLO 10H     Trum Anound     Caretabal MM 88220       Nomin     EEU SE HAN SOLO 10H     Trum Anound     Caretabal MM 88220       Nomin     EEU SE HAN SOLO 10H     Trum Anound     Caretabal MM 88220       Nomin     EEU SE HAN SOLO 10H     Trum Anound     Caretabal MM 88220       Nomin     EEU SE HAN SOLO 10H     Trum Anound     Caretabal MM 88220       Statame     Connet Store     IA AM YSIS REALEST     AMAYSIS REALEST       Value     EFO Connet Store     IA AM YSIS REALEST     AMAYSIS REALEST       Statame     Connet Store     IA AM     Effective T     AMAYSIS REALEST       Statame     Connet Store     IA AM     Effective T     AMAYSIS REALEST       Statame     Connet Store     IA AM     Effective T     AMAYSIS REALEST       Statame     Caretabal MM MAN     Banchold     I X X X     AMAYSIS REALEST       Statame     Caretabal MM MAN     Banchold     X X X X     AMAYSIS REALEST       Statame     Statame     Connet Statame     Effective T <td>company Name:</td> <td>Ensolum, LLC</td> <td></td> <td>ŭ</td> <td>pmpany Na</td> <td>me:</td> <td>XTO Enel</td> <td>gy, Inc.</td> <td></td> <td></td> <td>Program: UST/P</td> <td>ST 🗌 PRP</td> <td>Brownfields 🗌 R</td> <td>_</td> <td>Ifund [</td>	company Name:	Ensolum, LLC		ŭ	pmpany Na	me:	XTO Enel	gy, Inc.			Program: UST/P	ST 🗌 PRP	Brownfields 🗌 R	_	Ifund [
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31 / Na	hone:	9898540852		Email: bt	velill@ens.	olum.cor	c.				Deliverables: EC			Other:	
31 / Na	roject Name:	BEU 5E HAN SOL	O 105H	Turn A	puno.					ANALYSIS REC	UEST		Prese	ervative Co	des
aatur	roject Number:	03E1558056			] Rush	Pres. Code							None: NO	DI Wa	ter: H <sub>2</sub> (
	roject Location:	EDDY COUNTY		Date:									Cool: Cool	MeOF	: Me
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	amples Received	Vec No NHA	Correction Factor		0-200	Par	16 :A		=				Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : N	VaSO <sub>3</sub>	
31 / Na	ample Clistody St	Yes No	Temperature Rea	dina:	36		43)	_	8	D-2588 Chain of	Custody		Zn Acetate	+NaOH: Zn	
31 / Na	otal Containers:	3	Corrected Temper	ature:	20				_	_	-	_	NaOH+Asc	corbic Acid: S	APC
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7/25/2022

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# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2588 List Number: 1 Creator: Clifton, Cloe

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

N/A

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

Eurofins Carlsbad Released to Imaging: 11/23/2022 1:52:32 PM 14

Job Number: 890-2588-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

14

Job Number: 890-2588-1 SDG Number: 03E1558056

List Source: Eurofins Midland

List Creation: 07/21/22 10:51 AM

# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2588 List Number: 2 Creator: Rodriguez, Leticia

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

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

Received by OCD: 8/19/2022 11:50:23 AM

LINKS

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

Released to Imaging: 11/23/2022 1:52:32 PM

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Ask— The Expert

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# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2589-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 10:28:27 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com of 256

13 14

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

SDG: 03E1558056

Page 80 of 256

2

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	Definitions/Glossary		
Client: Ensolur		ID: 890-2589-1	
Project/Site: B	EU 5E HAN SOLO 105H SD	G: 03E1558056	
Qualifiers			
GC VOA Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		-
F2	MS/MSD RPD exceeds control limits		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		-
HPLC/IC			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		4
DER	Duplicate Error Ratio (normalized absolute difference)		1
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)		

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present

Presumptive

Quality Control

Method Quantitation Limit

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Reporting Limit or Requested Limit (Radiochemistry)

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

MCL

MDA

MDC

MDL

MPN

MQL

NC

ND NEG

POS

PQL

PRES

QC

RER

RPD

TEF

TEQ TNTC

RL

ML

4

5

Job ID: 890-2589-1 SDG: 03E1558056

# Job ID: 890-2589-1

Client: Ensolum

# Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2589-1

#### Receipt

The sample was received on 7/19/2022 3:58 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

# GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30263 and analytical batch 880-30484 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

# GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30311 and analytical batch 880-30249 was outside the upper control limits.

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

#### HPLC/IC

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

RL

Unit

D

Prepared

Dil Fac

Job ID: 890-2589-1 SDG: 03E1558056

# **Client Sample ID: SS06**

Client: Ensolum

Analyte

Date Collected: 07/13/22 13:30

Analyzed

# Lab Sample ID: 890-2589-1 Matrix: Solid

5

	3

Date Received: 07/19/			
Sample Depth: 0.5	22 10.00		
Sample Depth. 0.5			

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

	·							
Benzene	<0.00199	U	0.00199	mg/Kg		07/21/22 13:27	07/25/22 01:48	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/21/22 13:27	07/25/22 01:48	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/21/22 13:27	07/25/22 01:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/21/22 13:27	07/25/22 01:48	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/21/22 13:27	07/25/22 01:48	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/21/22 13:27	07/25/22 01:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 _ 130			07/21/22 13:27	07/25/22 01:48	1
1,4-Difluorobenzene (Surr)	83		70 - 130			07/21/22 13:27	07/25/22 01:48	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			07/25/22 10:43	1
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
-					_			
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
-		Qualifier	<b>RL</b> 49.9	Unit mg/Kg	<u> </u>	Prepared	Analyzed 07/22/22 11:22	Dil Fac
Analyte	<b>Result</b> <49.9	Qualifier U			<u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Range	e Organics (D	Qualifier U			<u>D</u> 	Prepared Prepared		Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics	e Organics (D	Qualifier U RO) (GC) Qualifier	49.9	mg/Kg		<u> </u>	07/22/22 11:22	1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10	e Organics (D) Result <49.9 e Organics (D) Result <49.9	Qualifier U RO) (GC) Qualifier U	49.9 	mg/Kg Unit mg/Kg		Prepared 07/21/22 17:17	07/22/22 11:22 Analyzed 07/22/22 06:21	1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9 e Organics (DI Result	Qualifier U RO) (GC) Qualifier U	49.9 	mg/Kg Unit		Prepared	07/22/22 11:22 Analyzed	1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10	e Organics (D) Result <49.9 e Organics (D) Result <49.9	Qualifier U RO) (GC) Qualifier U U	49.9 	mg/Kg Unit mg/Kg		Prepared 07/21/22 17:17	07/22/22 11:22 Analyzed 07/22/22 06:21	1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <49.9	Qualifier U RO) (GC) Qualifier U U U	49.9 <b>RL</b> 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/21/22 17:17 07/21/22 17:17	07/22/22 11:22 Analyzed 07/22/22 06:21 07/22/22 06:21	1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <49.9	Qualifier U RO) (GC) Qualifier U U U	49.9 <b>RL</b> 49.9 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/21/22 17:17 07/21/22 17:17 07/21/22 17:17	07/22/22 11:22 Analyzed 07/22/22 06:21 07/22/22 06:21 07/22/22 06:21	1 Dil Fac 1 1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <49.9	Qualifier U RO) (GC) Qualifier U U U	49.9 <b>RL</b> 49.9 49.9 49.9 <b>Limits</b>	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/21/22 17:17 07/21/22 17:17 07/21/22 17:17 Prepared	07/22/22 11:22 Analyzed 07/22/22 06:21 07/22/22 06:21 07/22/22 06:21 Analyzed	1 Dil Fac 1 1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result         <49.9           e Organics (DI         Result           <49.9	Qualifier U RO) (GC) Qualifier U U U Qualifier	49.9 <b>RL</b> 49.9 49.9 49.9 <u>Limits</u> 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/21/22 17:17 07/21/22 17:17 07/21/22 17:17 Prepared 07/21/22 17:17	07/22/22 11:22 Analyzed 07/22/22 06:21 07/22/22 06:21 07/22/22 06:21 Analyzed 07/22/22 06:21	1 Dil Fac 1 1 1 1 <b>Dil Fac</b> 1
Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <49.9	Qualifier U RO) (GC) Qualifier U U U Qualifier	49.9 <b>RL</b> 49.9 49.9 49.9 <u>Limits</u> 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/21/22 17:17 07/21/22 17:17 07/21/22 17:17 Prepared 07/21/22 17:17	07/22/22 11:22 Analyzed 07/22/22 06:21 07/22/22 06:21 07/22/22 06:21 Analyzed 07/22/22 06:21	1 Dil Fac 1 1 1 1 Dil Fac 1

Job ID: 890-2589-1 SDG: 03E1558056

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

Matrix: Solid

Client: Ensolum

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		÷
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-2588-A-1-D MS	Matrix Spike	124	86		1
890-2588-A-1-E MSD	Matrix Spike Duplicate	96	94		
890-2589-1	SS06	116	83		- 2
LCS 880-30263/1-A	Lab Control Sample	107	93		
LCSD 880-30263/2-A	Lab Control Sample Dup	105	92		
MB 880-30263/5-A	Method Blank	103	84		
MB 880-30478/5-A	Method Blank	98	86		
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

# Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
7-A-1-D MS	Matrix Spike	85	92	
87-A-1-E MSD	Matrix Spike Duplicate	84	90	
39-1	SS06	109	121	
0-30311/2-A	Lab Control Sample	106	124	
880-30311/3-A	Lab Control Sample Dup	101	117	
880-30311/1-A	Method Blank	147 S1+	175 S1+	

# Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

Lab Sample ID: MB 880-30263/ Matrix: Solid Analysis Batch: 30484	5-A					Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	Total/NA
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/21/22 13:27	07/25/22 01:06	1
1,4-Difluorobenzene (Surr)	84		70 - 130			07/21/22 13:27	07/25/22 01:06	1

# Lab Sample ID: LCS 880-30263/1-A Matrix: Solid

# Analysis Batch: 30484

Spik	e LCS	LCS			%Rec
Analyte Adde	d Result	Qualifier Unit	D	%Rec	Limits
Benzene 0.10	0 0.1021	mg/Kg		102	70 - 130
Toluene 0.10	0 0.1045	mg/Kg		104	70 - 130
Ethylbenzene 0.10	0 0.1094	mg/Kg		109	70 - 130
m-Xylene & p-Xylene 0.20	0 0.2212	mg/Kg		111	70 - 130
o-Xylene 0.10	0 0.1237	mg/Kg		124	70 - 130

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

# Lab Sample ID: LCSD 880-30263/2-A

# Matrix: Solid

Analysis Batch: 30484							Prep Batch: 3		30263	
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08838		mg/Kg		88	70 - 130	14	35	
Toluene	0.100	0.09280		mg/Kg		93	70 - 130	12	35	
Ethylbenzene	0.100	0.09635		mg/Kg		96	70 - 130	13	35	
m-Xylene & p-Xylene	0.200	0.1949		mg/Kg		97	70 - 130	13	35	
o-Xylene	0.100	0.1089		mg/Kg		109	70 - 130	13	35	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

# Lab Sample ID: 890-2588-A-1-D MS

#### Matrix: Solid Analysis Potoby 20494

Analy	sis Batch: 30484									Prep	Batch: 30263
		Sample	Sample	Spike	MS	MS				%Rec	
Analyte		Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzen	e	<0.00200	U F2 F1	0.100	0.02542	F1	mg/Kg		25	70 - 130	
Toluene		<0.00200	U F1	0.100	0.03588	F1	mg/Kg		34	70 - 130	

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Prep Type: Total/NA

# **Client Sample ID: Method Blank**

Job ID: 890-2589-1 SDG: 03E1558056

# Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 30263

Eurofins	Carlst

**Client Sample ID: Matrix Spike** 

MS MS

0.04162 F1

0.08704 F1

0.05151 F1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.100

0.200

0.100

Limits

70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 890-2588-A-1-D MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 30484

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Sample Sample

<0.00200 U F2 F1

<0.00399 U F2 F1

<0.00200 U F2 F1

MS MS

124

86

Qualifier

%Recovery

**Result Qualifier** 

Job ID: 890-2589-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Batch: 30263

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

41

43

51

D

# 2 3 4 5 6 7 8 9 10 11

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

Matrix: Solid Analysis Batch: 30484

Lab Sample ID: 890-2588-A-1-E MSD

Analysis Batch: 30484									Prep	Batch:	30263	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00200	U F2 F1	0.0990	0.01645	F2 F1	mg/Kg		17	70 - 130	43	35	
Toluene	<0.00200	U F1	0.0990	0.02796	F1	mg/Kg		27	70 - 130	25	35	ï
Ethylbenzene	<0.00200	U F2 F1	0.0990	0.02785	F2 F1	mg/Kg		27	70 - 130	40	35	
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.198	0.05748	F2 F1	mg/Kg		28	70 - 130	41	35	ŝ
o-Xylene	<0.00200	U F2 F1	0.0990	0.03580	F2 F1	mg/Kg		36	70 - 130	36	35	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

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

# Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 30478

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			07/23/22 18:30	07/24/22 14:29	1
1,4-Difluorobenzene (Surr)	86		70 - 130			07/23/22 18:30	07/24/22 14:29	1

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

Lab Sample ID: MB 880-30311/1-A Matrix: Solid Analysis Batch: 30249		MD				Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Total/NA
• • •		MB			-	- ·		
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/21/22 17:17	07/22/22 00:07	1
(GRO)-C6-C10								

RL

50.0

50.0

Limits

70 - 130 70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: MB 880-30311/1-A

Matrix: Solid

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

Analysis Batch: 30249

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

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

MB MB

<50.0 U

<50.0 U

MB MB

147 S1+

175 S1+

%Recovery Qualifier

Result Qualifier

			Job ID: 890 SDG: 03E1		
		Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batcl	Fotal/NA	
Unit	D	Prepared	Analyzed	Dil Fac	
mg/Kg		07/21/22 17:17	07/22/22 00:07	1	
mg/Kg		07/21/22 17:17	07/22/22 00:07	1	
		Prepared	Analyzed	Dil Fac	
		07/21/22 17:17	07/22/22 00:07	1	
		07/21/22 17:17	07/22/22 00:07	1	

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

# Lab Sample ID: LCS 880-30311/2-A Matrix: Solid

Analysis Batch: 30249							Prep	Batch: 30311
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1172		mg/Kg		117	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	984.1		mg/Kg		98	70 - 130	
C10-C28)								

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	124		70 - 130

Lab Sample ID: LCSD 880-30311/3-A Matrix: Solid Analysis Batch: 30249				Clier	nt Sam	iple ID:		ol Sampl Type: To Batch:	tal/NA
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1181		mg/Kg		118	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	974.2		mg/Kg		97	70 - 130	1	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: 890-2587-A-1-D MS
Matrix: Solid
Analysis Batch: 30249

	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	1292		mg/Kg		129	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	828.7		mg/Kg		81	70 - 130	

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

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Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 30311

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2589-1 SDG: 03E1558056

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

Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 30249									Prep	Batch:	30311
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1249		mg/Kg		125	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	808.9		mg/Kg		79	70 - 130	2	2
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	84		70 - 130								
o-Terphenyl	90		70 - 130								
lethod: 300.0 - Anions, Ion Lab Sample ID: MB 880-30245/1 Matrix: Solid Analysis Batch: 30486		ograpny						Client S	ample ID: Prep	Method Type: S	
		MB MB									
Analyte		esult Qualifier		RL	Unit		D P	repared	Analyz		Dil Fa
Chloride	<	5.00 U		5.00	mg/K	g			07/24/22	23:00	
							Client	Sample	ID·I ah C	ontrol S	ampl
Matrix: Solid	Z-A						Chich	Campic		Type: S	
Matrix: Solid	Z-A		Spike	LCS	LCS			Gumpic			
Matrix: Solid Analysis Batch: 30486	2-A		Spike Added		LCS Qualifier	Unit	D	%Rec	Prep		
Matrix: Solid Analysis Batch: 30486 Analyte	<b>Z-A</b>					Unit mg/Kg		-	Prep %Rec		
Matrix: Solid Analysis Batch: 30486 Analyte Chloride			Added	Result		mg/Kg	D	<b>%Rec</b> 106	Prep %Rec Limits	Type: S	olub
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3024			Added	Result		mg/Kg	D	<b>%Rec</b> 106	Prep %Rec Limits 90 - 110	Type: S	le Du
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid			Added	Result		mg/Kg	D	<b>%Rec</b> 106	Prep %Rec Limits 90 - 110	Type: S	le Du
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid			Added	Result 264.1		mg/Kg	D	<b>%Rec</b> 106	Prep %Rec Limits 90 - 110	Type: S	le Du
Lab Sample ID: LCS 880-30245/ Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486			Added 250	Result 264.1 LCSD	Qualifier	mg/Kg	D	<b>%Rec</b> 106	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: S	le Du olubi
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486			Added 250 Spike	Result 264.1 LCSD	Qualifier	mg/Kg Clie	D	%Rec 106 aple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: S	le Du olubi olubi RP Lim
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A-1-E Matrix: Solid	5/3-A		Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clie	D	%Rec           106           aple ID: I           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S DI Sampl Type: S <u>RPD</u> 1	le Du Jolubi RP Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A-1-E Matrix: Solid	5/3-A B MS		Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier	mg/Kg Clie	D	%Rec           106           aple ID: I           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	Type: S ol Sampl Type: S <u>RPD</u> 1 : Matrix	le Du Jolubi Colubi RPI Lim 2 Spike
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 880-17194-A-1-E Matrix: Solid Analysis Batch: 30486	5/3-A B MS Sample	-	Added 250 Spike Added 250 Spike	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	D_ nt Sam D_	%Rec 106 ple ID: 1 %Rec 106 Client	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	Type: S ol Sampl Type: S <u>RPD</u> 1 : Matrix	le Duj olubli colubli <u>Lim</u> 2 Spike
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A-1-E Matrix: Solid Analysis Batch: 30486 Analyte	5/3-A B MS Sample	Sample Qualifier	Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier	mg/Kg Clie	D	%Rec           106           aple ID: I           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	Type: S ol Sampl Type: S <u>RPD</u> 1 : Matrix	le Du Jolubi RP Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 880-17194-A-1-E Matrix: Solid Analysis Batch: 30486 Analysis Batch: 30486 Analysis Batch: 30486 Analysis Batch: 30486 Analysis Batch: 30486 Analysis Batch: 30486	5/3-A B MS Sample Result 948	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS	Unit mg/Kg	D	%Rec           106           %Rec           106           Client           %Rec           91	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	Type: S DI Sampl Type: S RPD 1 C: Matrix Type: S	le Du bolubl RP Lim 2 Spik volubl
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30244 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 880-17194-A-1-E Matrix: Solid	5/3-A B MS Sample Result 948	Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier MS	Unit mg/Kg	D	%Rec           106           %Rec           106           Client           %Rec           91	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	Type: S ol Sampl Type: S <u> RPD </u> 1 o: Matrix Type: S pike Dup	le Du bolubl RP Lim 2 Spik volubl

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# **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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# Job ID: 890-2589-1 SDG: 03E1558056

**GC VOA** 

# Prep Batch: 30263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2589-1	SS06	Total/NA	Solid	5035	
MB 880-30263/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	5035	
_CSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
390-2588-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2588-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30478/5-A	Method Blank	Total/NA	Solid	5035	

# Analysis Batch: 30484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30478/5-A	Method Blank	Total/NA	Solid	5035	
nalysis Batch: 30484					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2589-1	SS06	Total/NA	Solid	8021B	30263
MB 880-30263/5-A	Method Blank	Total/NA	Solid	8021B	30263
MB 880-30478/5-A	Method Blank	Total/NA	Solid	8021B	30478
_CS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	8021B	30263
_CSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30263
890-2588-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30263
890-2588-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30263

# Analysis Batch: 30552

L	_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
8	390-2589-1	SS06	Total/NA	Solid	Total BTEX	

# GC Semi VOA

# Analysis Batch: 30249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2589-1	SS06	Total/NA	Solid	8015B NM	30311
MB 880-30311/1-A	Method Blank	Total/NA	Solid	8015B NM	30311
LCS 880-30311/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30311
LCSD 880-30311/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30311
890-2587-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30311
890-2587-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30311

# Prep Batch: 30311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2589-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-30311/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30311/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30311/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2587-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2587-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2589-1	SS06	Total/NA	Solid	8015 NM	

# **QC** Association Summary

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

HPLC/IC

# Leach Batch: 30245

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
90-2589-1	SS06	Soluble	Solid	DI Leach	
/IB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
CSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
380-17194-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
380-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 30486					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
390-2589-1	SS06	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
_CS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
CSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
380-17194-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30245
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2589-1	SS06	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30245
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

SDG: 03E1558056

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Job ID: 890-2589-1 SDG: 03E1558056

# Lab Sample ID: 890-2589-1 Matrix: Solid

Date Collected: 07/13/22 13:30 Date Received: 07/19/22 15:58

**Client Sample ID: SS06** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	30263	07/21/22 13:27	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30484	07/25/22 01:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30552	07/25/22 10:43	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30393	07/22/22 11:22	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30311	07/21/22 17:17	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30249	07/22/22 06:21	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 00:10	СН	XEN MID

Laboratory References:

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

Eurofins Carlsbad

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# Accreditation/Certification Summary

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Laboratory: Eurofins Midland

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

hority	F	Program	Identification Number	Expiration Date
as	Ν	NELAP	T104704400-22-24	06-30-23
The following analytes the agency does not o		out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for
0,		Matrix	Analyte	
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH	

Job ID: 890-2589-1

SDG: 03E1558056

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# Job ID: 890-2589-1 SDG: 03E1558056

lethod	Method Description	Protocol	Laboratory	
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID	
lotal BTEX	Total BTEX Calculation	TAL SOP	XEN MID	
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID	
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID	
800.0	Anions, Ion Chromatography	MCAWW	XEN MID	
5035	Closed System Purge and Trap	SW846	XEN MID	
8015NM Prep	Microextraction	SW846	XEN MID	
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID	

# Protocol References:

Client: Ensolum

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

5	
8	
9	
11	
13	

# Sample Summary

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2589-1
SDG: 03E1558056

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-2589-1	SS06	Solid	07/13/22 13:30	07/19/22 15:58		

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# Chain of Custody

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

										1100,00100, WWW		- 190	l IO
Project Manager:	Ben Belill			Bill to: (if different)	rent)	Garrett Green	Green			Wor	Work Order Comments	omments	
Company Name:	Ensolum, LLC			Company Name:	ime:	XTO E	XTO Energy, Inc.	ö	Progr	Program: UST/PST 🗌 PRP 🗍 Brownfields 🗍 RRC 🗍	P Brownf	lields 🗌 RRC [	] Superfund
Address:	3122 National parks Hwy	Hwy		Address:		3104 E	3104 E. Green Street	Street	State	State of Project:			
City, State ZIP:	Carlsbad, NM 88220			City, State ZIP:	Ŀ.	Carlsb	Carlsbad, NM 88220	8220	Repor	Reporting: Level II Clevel III C PST/UST		UST 🗌 TRRP 📋	
Phone:	9898540852		Email:	Email: bbelil@ens	@ensolum.com	E			Delive	Deliverables: EDD	ADaPT	Other:	
Project Name:	BEU 5E HAN SOLO 105H	10105H	Tum	Turn Around				ANA	ANALYSIS REQUEST			Preservat	Preservative Codes
Project Number:	03E1558056	56	Soutine	🗌 Rush	Pres. Code						2	None: NO	DI Water: H <sub>2</sub> O
Project Location:	EDDY COUNTY, NM	Y, NM	Due Date:									Cool: Cool	MeOH: Me
Sampler's Name:	Conner Shore	ore	TAT starts th	TAT starts the day received by the lab if received by 4:30pm	· · · · ·		<u> </u>				<u>-</u>	HCL: HC H-S02 H-	HNO <sub>3</sub> : HN NaOH: Na
PO#:	+			(9)	ters								
SAMPLE RECEIPT	Temp	No No	Wet Ice:	Kes No	T	(0.0							
Samples Received Intact:	Res	Thermometer ID:	er ID:	Thom -	919	: 30					<u> </u>	NaHSU4: NABIS	
Cooler Custody Seals:	Yes No	N/A Correction Factor	actor:	- 9 C -	d	A93					2	Na20203: Na003	
Sample Custody Seals:	aals: Yes No NVA	V Temperature Reading:	B Reading:	N.C	Y	9) S			890-2089 Chain of Custony	Islouy	- 7	Zn Acetate+NaOH: Zn	H: Zu
Total Containers:		Corrected T-	Corrected Temperature:	2.0		BDE	-	_	-	-		NaOH+Ascorbic Acid: SAPC	Acid: SAPC
Sample Id	Sample identification Matrix	x Date Sampled	Time Sampled	2	Grab/ # of Comp Cont	снгов	8) H9T ) X3T8					Sample C	Sample Comments
SS	SS06 S	7/19/2022	0461	0.5' Gr	Grab/ 1	×	××					Cost Center	Cost Center: 1568871001
			1										
							-						
					-								
		Å			-		┝						
					-		╞	-					
	X				-		╉						
					-		-					ncident IU:NA	Incident ID:NAPP2209731445
X					-		+						
							-						
Total 200 7 / 6010	5040 200 8 / 6020-		RCRA 13P	13PPM Texas 11	4.8	Al Sh As Ba Be B	3a Be	Cd Ca	Co Cu Fe Pb Ma Mn Mo Ni K	n Mo Ni K Se Ad	SiO, Na	SiO, Na Sr Ti Sn U V Zn	V Zn
ircle Method(s)	Circle Method(s) and Metal(s) to be analyzed	yzed	TCLP / SPLP	SPLP 6010:	0	' '	Ba Be	Cd Cr Co O	b Mn Mo Ni Se		Hg: 1631 / 2	245.1/7470/	7471
otice: Signature of th service. Eurofins Xe Eurofins Xenco. A n	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase of service. Eurofine Xenco will be liable only for the cost of samples and shall not assume any of Eurofins Asneco. A minimum charge of \$55.00 will be applied to aach project and a charge of	nt of samples cor ost of samples ai	stitutes a valid p rd shall not assu project and a ct	ourchase order fi ime any respons harge of \$5 for e	rom client c Ibility for a sch sample	company t ny losses submittee	Eurofins or expension	Xenco, its affiliates and si is incurred by the client if is Xenco, but not analyzev	ubcontractors. It assigns such losses are due to c d. These terms will be en	order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control 55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	ditions • control negotiated.		
Relinquished I	Relinquished by: (Signature)	Receive	Received by: (Signature)			Date/Time	ime	Relinquished	Relinquished by: (Signature)	Received by: (Signature)	: (Signature		Date/Time
X	E.	NAN N	- Mar	Stat	14	500	0 153						
				lan	:			4					

5

11 12 13

Job Number: 890-2589-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

# Login Number: 2589 List Number: 1 Creator: Clifton, Cloe

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

N/A

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

14

14

Job Number: 890-2589-1 SDG Number: 03E1558056

List Source: Eurofins Midland

List Creation: 07/21/22 10:51 AM

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2589 List Number: 2 Creator: Rodriguez, Leticia

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

Received by OCD: 8/19/2022 11:50:23 AM

LINKS

Review your project results through

EOL

**Have a Question?** 

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Ask— The Expert

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2591-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/25/2022 10:28:52 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com of 250

13 14

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

SDG: 03E1558056

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DL, RA, RE, IN

DLC

EDL

LOD

LOQ

MCL

MDA

MDC

MDL

ML MPN

MQL

NC

ND

NEG

POS PQL

PRES

QC RER

RL

RPD

TEF TEQ

TNTC

ceived by OC	D: 8/19/2022 11:50:23 AM	Page 100 of 256
	Definitions/Glossary	
Client: Ensolu Project/Site: E	im BEU 5E HAN SOLO 105H	Job ID: 890-2591-1 SDG: 03E1558056
Qualifiers		
GC VOA Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VO	-	
Qualifier	Qualifier Description	
S1- S1+	Surrogate recovery exceeds control limits, low biased. Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	1
¤	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	4
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	

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

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Presumptive Quality Control

Negative / Absent Positive / Present

Method Quantitation Limit

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Limit of Quantitation (DoD/DOE)

4

5

# Job ID: 890-2591-1 SDG: 03E1558056

# Job ID: 890-2591-1

Client: Ensolum

# Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2591-1

#### Receipt

The sample was received on 7/19/2022 3:58 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

# GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30263 and analytical batch 880-30484 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

# GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-30312 and analytical batch 880-30251 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30312/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: SS07 (890-2591-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

Method: 8021B - Volatile Organic Compounds (GC)

Job ID: 890-2591-1 SDG: 03E1558056

# Client Sample ID: SS07

Date Collected: 07/19/22 13:35 Date Received: 07/19/22 15:58

Sample Depth: 0.5

Client: Ensolum

SDG: 03E15580

# Lab Sample ID: 890-2591-1

Matrix: Solid

<b>591-1</b> : Solid	
	5
Dil Fac 1	
1	
1 1	8
Dil Fac	9
1 1	
Dil Fac	
1	
Dil Fac	13
1	

22 15:58

	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		07/21/22 13:27	07/25/22 02:09	1
Toluene	0.00205		0.00202	mg/Kg		07/21/22 13:27	07/25/22 02:09	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		07/21/22 13:27	07/25/22 02:09	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		07/21/22 13:27	07/25/22 02:09	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		07/21/22 13:27	07/25/22 02:09	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		07/21/22 13:27	07/25/22 02:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130			07/21/22 13:27	07/25/22 02:09	1
1,4-Difluorobenzene (Surr)	76		70 - 130			07/21/22 13:27	07/25/22 02:09	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			07/25/22 10:43	1
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			07/22/22 11:07	1
		•	49.0	mg/rtg			01/22/22 11:01	
			43.0	mgrig				I
Method: 8015B NM - Diesel Rang	ge Organics (D		RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D	RO) (GC) Qualifier			<u>D</u>	Prepared 07/21/22 17:20		
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	ge Organics (D	RO) (GC) Qualifier U	RL	<u>Unit</u>	<u>D</u>	· · · · · · · · · · · · · · · · · · ·	Analyzed	
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (D Result <49.8	RO) (GC) Qualifier U	<b>RL</b> 49.8 49.8	Unit mg/Kg	<u> </u>	07/21/22 17:20	Analyzed 07/22/22 09:31	
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (D Result <49.8	RO) (GC) Qualifier U	<b>RL</b> 49.8	Unit mg/Kg	<u>D</u>	07/21/22 17:20	Analyzed 07/22/22 09:31	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)	ge Organics (D Result <49.8 <49.8	RO) (GC) Qualifier U U	<b>RL</b> 49.8 49.8	Unit mg/Kg mg/Kg	<u>D</u>	07/21/22 17:20 07/21/22 17:20	Analyzed 07/22/22 09:31 07/22/22 09:31	1 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) Surrogate	ge Organics (D) Result <49.8 <49.8 <49.8 <49.8 <8 <49.8 <49.8	RO) (GC) Qualifier U U	<b>RL</b> 49.8 49.8 49.8	Unit mg/Kg mg/Kg	<u>D</u>	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20	Analyzed 07/22/22 09:31 07/22/22 09:31 07/22/22 09:31	1 1 1 <i>Dil Fac</i>
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 1-Chlorooctane	ge Organics (D) Result <49.8 <49.8 <49.8 <49.8 %Recovery 3	RO) (GC) Qualifier U U Qualifier	RL           49.8           49.8           49.8           Limits	Unit mg/Kg mg/Kg	<u> </u>	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 <b>Prepared</b>	Analyzed 07/22/22 09:31 07/22/22 09:31 07/22/22 09:31 Analyzed	1 1 1 <i>Dil Fac</i>
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 1-Chlorooctane o-Terphenyl	ge Organics (D) Result <49.8 <49.8 <49.8 <49.8 <i>%Recovery</i> 3 0.3	RO) (GC) Qualifier U U U Qualifier S1- S1-	RL           49.8           49.8           49.8           49.8           70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 <b>Prepared</b> 07/21/22 17:20	Analyzed 07/22/22 09:31 07/22/22 09:31 07/22/22 09:31 Analyzed 07/22/22 09:31	1 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 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chro Analyte	ge Organics (D) <u>Result</u> <49.8 <49.8 <49.8 <49.8 <u>%Recovery</u> 3 0.3 Comatography -	RO) (GC) Qualifier U U U Qualifier S1- S1-	RL           49.8           49.8           49.8           49.8           70 - 130	Unit mg/Kg mg/Kg	D	07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 07/21/22 17:20 <b>Prepared</b> 07/21/22 17:20	Analyzed 07/22/22 09:31 07/22/22 09:31 07/22/22 09:31 Analyzed 07/22/22 09:31	Dil Fac 1 1 1 1 <i>Dil Fac</i> 1 1 Dil Fac

Job ID: 890-2591-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Type: Total/NA

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

Matrix: Solid

Client: Ensolum

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2588-A-1-D MS	Matrix Spike	124	86	
890-2588-A-1-E MSD	Matrix Spike Duplicate	96	94	
890-2591-1	SS07	92	76	
LCS 880-30263/1-A	Lab Control Sample	107	93	
_CSD 880-30263/2-A	Lab Control Sample Dup	105	92	
MB 880-30263/5-A	Method Blank	103	84	
MB 880-30478/5-A	Method Blank	98	86	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

# Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1 (70-130)	OTPH1 (70-130)	
Lab Sample ID 880-17068-A-41-D MS	Client Sample ID Matrix Spike	84	83	
880-17068-A-41-E MSD	Matrix Spike Duplicate	85	84	
890-2591-1	SS07	3 S1-	0.3 S1-	
LCS 880-30312/2-A	Lab Control Sample	135 S1+	142 S1+	
LCSD 880-30312/3-A	Lab Control Sample Dup	116	127	
MB 880-30312/1-A	Method Blank	128	146 S1+	

# Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

Lab Sample ID: MB 880-30263/5-A Matrix: Solid Analysis Batch: 30484						Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	otal/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	07/21/22 13:27	07/25/22 01:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/21/22 13:27	07/25/22 01:06	1
1,4-Difluorobenzene (Surr)	84		70 - 130			07/21/22 13:27	07/25/22 01:06	1
Lab Sample ID: LCS 880-30263/1-A					c	lient Sample I	D: Lab Control	Sample

# Lab Sample ID: LCS 880-30263/1-A Matrix: Solid

# Analysis Batch: 30484

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1021		mg/Kg		102	70 - 130	
Toluene	0.100	0.1045		mg/Kg		104	70 - 130	
Ethylbenzene	0.100	0.1094		mg/Kg		109	70 - 130	
m-Xylene & p-Xylene	0.200	0.2212		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1237		mg/Kg		124	70 - 130	

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

# Lab Sample ID: LCSD 880-30263/2-A

# Matrix: Solid

Analysis Batch: 30484							Prep	Batch:	30263
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08838		mg/Kg		88	70 - 130	14	35
Toluene	0.100	0.09280		mg/Kg		93	70 - 130	12	35
Ethylbenzene	0.100	0.09635		mg/Kg		96	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1949		mg/Kg		97	70 - 130	13	35
o-Xylene	0.100	0.1089		mg/Kg		109	70 - 130	13	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

# Lab Sample ID: 890-2588-A-1-D MS

#### Matrix: Solid aluaia Batahi 20494

Analysis Batch: 30484									Prep	Batch: 30263
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F2 F1	0.100	0.02542	F1	mg/Kg		25	70 - 130	
Toluene	<0.00200	U F1	0.100	0.03588	F1	mg/Kg		34	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Batch: 30263

# Released to Imaging: 11/23/2022 1:52:32 PM

MS MS

0.04162 F1

0.08704 F1

0.05151 F1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.100

0.200

0.100

Limits

70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 890-2588-A-1-D MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 30484

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Sample Sample

<0.00200 U F2 F1

<0.00399 U F2 F1

<0.00200 U F2 F1

MS MS

124

86

Qualifier

%Recovery

**Result Qualifier** 

Job ID: 890-2591-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Batch: 30263

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

41

43

51

D

# 2 3 4 5 6 7 8 9 10 11

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

Matrix: Solid Analysis Batch: 30484

Lab Sample ID: 890-2588-A-1-E MSD

Analysis Batch: 30484									Prep	Batch:	30263	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00200	U F2 F1	0.0990	0.01645	F2 F1	mg/Kg		17	70 - 130	43	35	
Toluene	<0.00200	U F1	0.0990	0.02796	F1	mg/Kg		27	70 - 130	25	35	i
Ethylbenzene	<0.00200	U F2 F1	0.0990	0.02785	F2 F1	mg/Kg		27	70 - 130	40	35	
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.198	0.05748	F2 F1	mg/Kg		28	70 - 130	41	35	î
o-Xylene	<0.00200	U F2 F1	0.0990	0.03580	F2 F1	mg/Kg		36	70 - 130	36	35	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

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

# Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 30478

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			07/23/22 18:30	07/24/22 14:29	1
1,4-Difluorobenzene (Surr)	86		70 - 130			07/23/22 18:30	07/24/22 14:29	1

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

Lab Sample ID: MB 880-30312/1-A Matrix: Solid Analysis Batch: 30251	мв	МВ				Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batch	Total/NA
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	 mg/Kg		07/21/22 17:20	07/22/22 00:07	1
(GRO)-C6-C10								

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

Lab Sample ID: MB 880-30312 Matrix: Solid	/1 <b>-A</b>								Client Sa	ample ID: M Prep Ty		
Analysis Batch: 30251										Prep	Batch	: 30312
• • •		MB MB					_	_				
Analyte		sult Qualifie			Unit		D		repared	Analyze		Dil Fac
Diesel Range Organics (Over C10-C28)	<5	0.0 U	50.0		mg/K	g		07/2	1/22 17:20	07/22/22 0	0:07	1
OII Range Organics (Over C28-C36)	< F	0.0 U	50.0		mg/K	'n		07/2	1/22 17:20	07/22/22 0	0.07	1
		0.0 0	00.0		mg/iv	9		0172	1/22 11.20	01122/22 0	0.01	
		MB MB										
Surrogate	%Recov	ery Qualifie	r Limits					P	repared	Analyze	ed	Dil Fac
1-Chlorooctane		128	70 - 130					07/2	1/22 17:20	07/22/22 0	00:07	1
o-Terphenyl		146 S1+	70 - 130					07/2	1/22 17:20	07/22/22 0	00:07	
Lab Sample ID: LCS 880-3031	2/2_4						C	liont	Sample	ID: Lab Co	ntrol 9	Sample
Matrix: Solid	<b>2</b> /2- <b>A</b>						Ŭ	nem	Jampie	Prep Ty		-
												: 30312
Analysis Batch: 30251			Spike	1.06	LCS					%Rec	Datuil	. 30312
Analyte			Added		Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics	·	·	1000 Added	880.1	Quaimer				88	70 - 130		
Gasoline Range Organics			1000	000. I		mg/Kg			00	10 - 130		
Diesel Range Organics (Over			1000	1131		mg/Kg			113	70 - 130		
C10-C28)						5 5						
	LCS	109										
Surrogate	%Recovery		Limits									
1-Chlorooctane	135		70 - 130									
o-Terphenyl	142		70 - 130									
	12/3-A					СІ	ient	Sam	ple ID: L	ab Control		
Matrix: Solid	12/3-A					CI	ient	Sam	iple ID: L	Prep Ty	ype: To	otal/NA
Matrix: Solid	12/3-A		Spike	LCSD	LCSD	CI	ient	Sam	iple ID: L	Prep Ty	ype: To	otal/NA : 30312
Matrix: Solid Analysis Batch: 30251 <sup>Analyte</sup>	12/3-A		Added	Result	LCSD Qualifier	CI	ient	Sam	%Rec	Prep Ty Prep %Rec Limits	ppe: To Batch: RPD	otal/NA : 30312 RPC Limi
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics	12/3-A		-				ient		-	Prep Ty Prep %Rec	ype: To Batch	otal/NA : 30312 RPD Limit
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10	<b>12/3-A</b>		<b>Added</b> 1000	Result 807.8		<mark>Unit</mark> mg/Kg	ient		<b>%Rec</b> 81	Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch RPD 9	otal/NA : 30312 RPE Limi 20
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	12/3-A		Added	Result		Unit	ient		%Rec	Prep Ty Prep %Rec Limits	ppe: To Batch: RPD	otal/NA : 30312 RPE Limi 20
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over			<b>Added</b> 1000	Result 807.8		<mark>Unit</mark> mg/Kg	ient		<b>%Rec</b> 81	Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch RPD 9	otal/NA : 30312 RPE Limi 20
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	LCSD		Added	Result 807.8		<mark>Unit</mark> mg/Kg	ient		<b>%Rec</b> 81	Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch RPD 9	otal/NA : 30312 RPD Limit
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCSD %Recovery		Added 1000 1000 <i>Limits</i>	Result 807.8		<mark>Unit</mark> mg/Kg	ient		<b>%Rec</b> 81	Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch RPD 9	otal/NA : 30312 RPD Limit
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	LCSD %Recovery 116		Added	Result 807.8		<mark>Unit</mark> mg/Kg	ient		<b>%Rec</b> 81	Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch RPD 9	otal/NA : 30312 RPD Limit
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	LCSD %Recovery		Added 1000 1000 <u>Limits</u> 70 - 130	Result 807.8		<mark>Unit</mark> mg/Kg	ient		<b>%Rec</b> 81	Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch RPD 9	otal/NA : 30312 RPD Limit
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	LCSD %Recovery 116 127		Added 1000 1000 <u>Limits</u> 70 - 130	Result 807.8		<mark>Unit</mark> mg/Kg	ient		%Rec 81 100	Prep Ty           %Rec           Limits           70 - 130           70 - 130	ype: To Batch: RPD 9 13 Matrib	otal/NA : 30312 RPD Limit 20 20
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid	LCSD %Recovery 116 127		Added 1000 1000 <u>Limits</u> 70 - 130	Result 807.8		<mark>Unit</mark> mg/Kg	ient		%Rec 81 100	Prep Ty           %Rec           Limits           70 - 130           70 - 130	ype: To Batch: RPD 9 13 Matrib	otal/NA : 30312 RPD Limit 20 20
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid	LCSD %Recovery 116 127		Added 1000 1000 <u>Limits</u> 70 - 130	Result 807.8		<mark>Unit</mark> mg/Kg	ient		%Rec 81 100	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130	ype: To Batch: 9 13 Matrio ype: To	tal/NA 30312 RPD Limit 20 20 x Spike otal/NA
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid	LCSD %Recovery 116 127	Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 807.8 996.6		<mark>Unit</mark> mg/Kg	ient		%Rec 81 100	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130	ype: To Batch: 9 13 Matrio ype: To	otal/NA : 30312 RPD Limit 20 20
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid Analysis Batch: 30251	LCSD %Recovery 116 127 St-D MS Sample Result	Qualifier Sample Qualifier	Added 1000 1000 <u>Limits</u> 70 - 130 70 - 130	<b>Result</b> 807.8 996.6 MS	Qualifier	<mark>Unit</mark> mg/Kg	ient		%Rec 81 100	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep Ty Prep	ype: To Batch: 9 13 Matrio ype: To	tal/NA 30312 RPD Limit 20 20 x Spike otal/NA
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics	LCSD %Recovery 116 127 St-D MS Sample	Qualifier Sample Qualifier	Added 1000 1000 Limits 70 - 130 70 - 130 Spike	<b>Result</b> 807.8 996.6 MS	Qualifier	– <mark>Unit</mark> mg/Kg mg/Kg	ient	<u>D</u>	%Rec 81 100	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - Prep Ty Prep %Rec	ype: To Batch: 9 13 Matrio ype: To	tal/NA 30312 RPD Limit 20 20 x Spike otal/NA
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10	LCSD %Recovery 116 127 St-D MS Sample Result <50.0	Qualifier Sample Qualifier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 Spike Added 1000	Result           807.8           996.6           MS           Result           907.6	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg - <u>Unit</u> mg/Kg	ient	<u>D</u>	%Rec           81           100           Client \$           %Rec           88	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch: 9 13 Matrio ype: To	otal/NA : 30312 RPE Limi 20 20 20 x Spike otal/NA
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	LCSD %Recovery 116 127 St-D MS Sample Result	Qualifier Sample Qualifier	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 Spike Added	Result 807.8 996.6 MS Result	Qualifier	Unit mg/Kg mg/Kg	ient	<u>D</u>	%Rec 81 100 Client \$	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 -	ype: To Batch: 9 13 Matrio ype: To	tal/NA 30312 RPD Limit 20 20 x Spike otal/NA
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<i>LCSD</i> % <i>Recovery</i> 116 127 <b>1-D MS</b> Sample <u>Result</u> <50.0 <50.0	Qualifier Sample Qualifier J	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 Spike Added 1000	Result           807.8           996.6           MS           Result           907.6	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg - <u>Unit</u> mg/Kg	ient	<u>D</u>	%Rec           81           100           Client \$           %Rec           88	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch: 9 13 Matrio ype: To	tal/NA 30312 RPD Limit 20 20 x Spike otal/NA
Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<i>LCSD</i> % <i>Recovery</i> 116 127 <b>St-D MS</b> Sample <u>Result</u> <50.0 <50.0	Qualifier Sample Qualifier J J	Added           1000           1000           1000           1000 <i>Limits</i> 70 - 130           70 - 130           70 - 130           70 - 130           1000           1000           1000	Result           807.8           996.6           MS           Result           907.6	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg - <u>Unit</u> mg/Kg	ient	<u>D</u>	%Rec           81           100           Client \$           %Rec           88	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch: 9 13 Matrio ype: To	tal/NA 30312 RPD Limit 20 20 x Spike otal/NA
Lab Sample ID: LCSD 880-303 Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-17068-A-4 Matrix: Solid Analysis Batch: 30251 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	<i>LCSD</i> % <i>Recovery</i> 116 127 <b>St-D MS</b> Sample <u>Result</u> <50.0 <50.0	Qualifier Sample Qualifier J	Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130 Spike Added 1000	Result           807.8           996.6           MS           Result           907.6	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg - <u>Unit</u> mg/Kg	ient	<u>D</u>	%Rec           81           100           Client \$           %Rec           88	Prep Ty Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep Ty Prep %Rec Limits 70 - 130	ype: To Batch: 9 13 Matrio ype: To	tal/NA 30312 RPD Limit 20 20 x Spike otal/NA

83

o-Terphenyl

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

Matrix: Solid	-41-E MSD								): Matrix Sp Brop 1	Бике Бир Гуре: То	
Analysis Batch: 30251											
Analysis Batch: 50251	Sample	Sample	Spike	MSD	MSD				%Rec	Batch:	RPE
Analuto	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Analyte Gasoline Range Organics	- <u>Kesuii</u> <50.0		999	917.2			<u></u>		70 - 130	1	2
(GRO)-C6-C10	<50.0	0	999	917.2		mg/Kg		69	70 - 130	I	20
Diesel Range Organics (Over	<50.0	U	999	807.5		mg/Kg		81	70 - 130	1	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	85		70 - 130								
o-Terphenyl	84		70 - 130								
lethod: 300.0 - Anions, I Lab Sample ID: MB 880-3024 Matrix: Solid Analysis Batch: 30486								Client S	Sample ID: Prep	Method Type: S	
		MB MB									
Analyte		esult Qualifier		RL	Unit		D P	repared	Analyz		Dil Fa
Chloride	<	5.00 U		5.00	mg/k	g			07/24/22	23:00	
Lab Sample ID: LCS 880-302									ID: Lab Co Prep	Type: S	
										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	orabi
Analysis Batch: 30486			Spike		LCS				%Rec	.jpor o	orabi
Analysis Batch: 30486			Added	Result	Qualifier	Unit	D	%Rec	%Rec Limits		
Analysis Batch: 30486			-		Qualifier	 mg/Kg	D	<b>%Rec</b> 106	%Rec		
Analysis Batch: 30486 Analyte Chloride	 )245/3-A		Added	Result	Qualifier	mg/Kg		106	%Rec Limits 90 - 110		
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30	 )245/3-A		Added	Result	Qualifier	mg/Kg		106	%Rec Limits 90 - 110		e Du
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid	 )245/3-A		Added	Result	Qualifier	mg/Kg		106	%Rec Limits 90 - 110		e Du
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid	 )245/3-A		Added 250	Result 264.1	Qualifier	mg/Kg		106	%Rec Limits 90 - 110		le Du olubi
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486	 )245/3-A		Added	Result 264.1 LCSD	Qualifier LCSD	mg/Kg		106	%Rec Limits 90 - 110 Lab Contro Prep	ol Sampl Type: S	le Du olubi RP
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte	)245/3-A		Added 250 Spike	Result 264.1 LCSD	Qualifier LCSD Qualifier	mg/Kg		106	%Rec Limits 90 - 110 Lab Contro Prep %Rec		le Du olubl RP Lim
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier LCSD Qualifier	mg/Kg Clie Unit		106 <b>aple ID: I</b> <u>%Rec</u> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	DI Sampl Type: So 	le Du olubi RP Lim 2
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier LCSD Qualifier	mg/Kg Clie Unit		106 <b>aple ID: I</b> <u>%Rec</u> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	DI Sampl Type: So 	le Du olubl RP Lim 2 Spik
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier LCSD Qualifier	mg/Kg Clie Unit		106 <b>aple ID: I</b> <u>%Rec</u> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	DI Sampl Type: So <u>RPD</u> 1 : Matrix	le Du olubl RP Lim 2 Spik
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid			Added 250 Spike Added	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier	mg/Kg Clie Unit		106 <b>aple ID: I</b> <u>%Rec</u> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	DI Sampl Type: So <u>RPD</u> 1 : Matrix	le Du olubl RP Lim 2 Spik
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analysis Batch: 30486		Sample Qualifier	Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier	mg/Kg Clie Unit		106 <b>aple ID: I</b> <u>%Rec</u> 106	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	DI Sampl Type: So <u>RPD</u> 1 : Matrix	le Du olubl RP Lim 2 Spik
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analysis Batch: 30486 Analyte		-	Added 250 Spike Added 250 Spike	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg	 	106 ple ID: I %Rec 106 Client	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	DI Sampl Type: So <u>RPD</u> 1 : Matrix	le Du olubi RP Lim 2 Spik
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A	-1-B MS Sample Result 948	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS Qualifier	Unit Unit mg/Kg	D	106 ple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	el Sampl Type: So <u>RPD</u> 1 : Matrix Type: So	le Du olub RPP Linr 2 Spik olub
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid	-1-B MS Sample Result 948	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS Qualifier	Unit Unit mg/Kg	D	106 ple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	DI Sampl Type: So <u>RPD</u> 1 : Matrix Type: So 	le Du olubi RPP Lim 2 Spik olubi
Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid	-1-B MS Sample Result 948	Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier MS Qualifier	Unit Unit mg/Kg	D	106 ple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	DI Sampl Type: So <u>RPD</u> 1 : Matrix Type: So 	le Du olubl RP Lim 2 Spik olubl
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analyte Chloride Lab Sample ID: 880-17194-A Matrix: Solid Analyte Chloride	-1-B MS Sample <u>Result</u> 948 -1-C MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier	Unit Unit mg/Kg	D	106 ple ID: I %Rec 106 Client %Rec 91	%Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 0: Matrix Sp Prep	DI Sampl Type: So <u>RPD</u> 1 : Matrix Type: So 	le Du olubi RPI Lim 2 Spik olubi

Eurofins Carlsbad

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# **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

8

Job ID: 890-2591-1 SDG: 03E1558056

# GC VOA

# Prep Batch: 30263

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2591-1	SS07	Total/NA	Solid	5035	
MB 880-30263/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2588-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2588-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Prep Batch: 30478					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Total/NA

Solid

5035

MB 880-30478/5-A	Method Blank	

# Analysis Batch: 30484

_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2591-1	SS07	Total/NA	Solid	8021B	30263
MB 880-30263/5-A	Method Blank	Total/NA	Solid	8021B	30263
MB 880-30478/5-A	Method Blank	Total/NA	Solid	8021B	30478
_CS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	8021B	30263
_CSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30263
390-2588-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30263
390-2588-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30263

# Analysis Batch: 30553

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2591-1	SS07	Total/NA	Solid	Total BTEX	

# GC Semi VOA

# Analysis Batch: 30251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2591-1	SS07	Total/NA	Solid	8015B NM	30312
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015B NM	30312
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30312
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30312
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30312
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30312

# Prep Batch: 30312

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2591-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-30312/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30312/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17068-A-41-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17068-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2591-1	SS07	Total/NA	Solid	8015 NM	
# **QC** Association Summary

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

#### HPLC/IC

#### Leach Batch: 30245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2591-1	SS07	Soluble	Solid	DI Leach	
MB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
Analysis Batch: 30486					

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2591-1	SS07	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30245
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

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#### Job ID: 890-2591-1 SDG: 03E1558056

Job ID: 890-2591-1 SDG: 03E1558056

#### Lab Sample ID: 890-2591-1 Matrix: Solid

Client Sample ID: SS07 Date Collected: 07/19/22 13:35 Date Received: 07/19/22 15:58

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	30263	07/21/22 13:27	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30484	07/25/22 02:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30553	07/25/22 10:43	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30387	07/22/22 11:07	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30312	07/21/22 17:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30251	07/22/22 09:31	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 00:34	СН	XEN MID

#### Laboratory References:

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

Eurofins Carlsbad

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## **Accreditation/Certification Summary**

	•				
Client: Ensolum				Job ID: 890-2591-1	
Project/Site: BEU 5E H	IAN SOLU 105H			SDG: 03E1558056	
Laboratory: Eurof	ins Midland				
Unless otherwise noted, all a	analytes for this laboratory we	ere covered under each acc	reditation/certification below.		
Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	N	ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report, bu	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for which	5
the agency does not o					
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					13

Eurofins Carlsbad

SDG: 03E1558056

#### 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:

Client: Ensolum

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

Job ID: 890-2591-1

5
8
9
11
13

**Eurofins Carlsbad** 

# **Sample Summary**

Job ID: 890-2591-1 SDG: 03E1558056

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-2591-1	SS07	Solid	07/19/22 13:35	07/19/22 15:58	0.5	4
						5
						8
						9
						12
						13

Environment Jesting

in TX (210) 509-3334 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (430) 704-5440 0-- 4410

**Chain of Custody** 

Work Order No:

Company Name:     Ensolum, LLC       Jourpany Name:     Brisolum, LLC       ddress:     3122 National parks Hwy       Jity, State ZIP:     Carlsbad, NM 88220       hone:     98985540852       hone:     98985540852       roject Number:     03E1558056       roject Location:     EDDY COUNTY, NM       ampler's Name:     Conner Shore       O.#:     Conner Shore       O.#:     Conner Shore       O.#:     SAMPLE RECEIPT       Temp Blank:     Yes       Contextordy Seals:     Yes No       colal Containers:     Yes No       Sample Custordy Seals:     Yes No       Sample Identification     Matrix       Sample Identification     Sample	s Hwy 20 SOLO 105H 8056 NTY, NM Shore Shore		DIN IO. (II OINELEUS)		Garrett Green	Ē			Work Order Comments	ommenus
e ZIP: Carl ame: 9899 ame: 9899 umber: carlon: 5 s Name: carlon: 6 s Name: 10 carlon: 10 s S Name: 10 s Name: 10 s S Name: 10 s S Name: 10 s S S S S S S S S S S S S S S S S S S S	K 105		Company Name		XTO Energy, Inc.	Inc.		Program: UST/PST		PRP     Brownfields     RC     Superfund
e ZIP: Carl ame: 989, umber: coation: s Name: Received Intact: Carl Received Intact: Utstody Seals: Utstody Seals: Utstody Seals: Custody Seals: Custody Seals: SS07 SS07	126 105H		Address:		3104 E. Green Street	n Street		State of Project	÷	
989 989 Ad Intact: Seals: Seals:	SOLO 105H 8056 NTY, NM Shore		City, State ZIP:	Ca	Carlsbad, NM 88220	188220		Reporting: Leve	Reporting: Level II 🔲 Level III 🔲 PST/UST 🗍 TRRP 🗍	r/UST 🗌 TRRP 🔲 Level IV 🗌
SS07	SOLO 105H 8056 NTY, NM Shore	Email:	Email: bbelil@ensolum.com	Im.com				Deliverables: EDD	DD 🗌 ADaPT 🛛	r 🗆 Other:
CELPT CELPT dd Intact: Seals: Seals: SS07		Turn	Turn Around				ANALYSIS REQUEST	REQUEST		Preservative Codes
CELPT CELPT CELPT Seals: Seals: Seals: Soly		Soutine	🗆 Rush	Pres. Code						None: NO DI Water: H <sub>2</sub> O
CEIPT Te CEIPT Te dentification dentification	nore	Due Date:								Cool: Cool MeOH: Me
CEIPT Temp Bi d Intact: Tess seals: Yes No Seals: Yes No dentification	Ces	TAT starts the the lab, if reco	TAT starts the day received by the lab, if received by 4:30pm	LS						2
d Intact: res No seals: Yes No Seals: Yes No dentification SS07		Wet Ice:	Xes No	eten						H <sub>3</sub> PO4: HP
seals: Yes No Seals: Yes No dentification SS07	Thermometer ID:	Ö	TAM-B							NaHSO4: NABIS
Seals: Yes No dentification SS07	NA Correction Factor:	actor:	~ O. D							Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
dentification SS07	N/A Temperature Reading:	Reading:	(K				890-2591 C	890-2591 Chain of Custo	-	Zn Acetate+NaOH: Zn
	Corrected Temperature	mperature:	2			208	-			NaOH+Ascorbic Acid: SAPC
	Matrix Date Sampled	Time Sampled	Depth Grab/ Comp	CHFOB Cont Cont #	18) H9T	) XЭТӨ				Sample Comments
	7/19/2022	2451	0.5' Grab/	× -	×	×				Cost Center: 1568871001
13										Incident ID-NAPP2209731445
0										
Real Providence of the second se										
Total 200.7 / 6010 200.8 / 6020: incle Method(s) and Metal(s) to be analyzed		BRCRA 13PPM TCLP / SPLP	RA 13PPM Texas 11 AI TCLP / SPLP 6010: 8RCRA	AI Sb A CRA Sb	Sb As Ba Be B Sb As Ba Be (	e B Cd Cz Be Cd Cr	Cd Ca Cr Co Cu Fe Pb Mi Cd Cr Co Cu Pb Mn Mo Ni	Pb Mg Mn Mo Ni Mo Ni Se Ag Ti U	K Se Ag SiO <sub>2</sub> Na Hg: 1631 /	a Sr Tl Sn U V Zn 245.1/7470 /7471
otice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions i 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 Eurofins Xenco. A minimum charge of 85.00 will be applied to each project and a charge of 55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiat Eurofins Xenco. A minimum charge of 85.00 will be applied to each project and a charge of 55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiat	ment of samples cons te cost of samples an till be applied to each	titutes a valid pu d shall not assur project and a ch	5 5 2	client comp ty for any lo sample sub	iny to Eurol ises or exp nitted to Eu	ns Xenco, its af nses incurred b ofins Xenco, bu	iliates and subcontrac the client if such los not analyzed. These t	order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions seponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control 55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	erms and conditions es beyond the control ss previously negotiated.	
Relinquished by: (Signature)	Receive	Received by: (Signature)	ure)	ă	Date/Time	Rel	Relinquished by: (Signature)	gnature) Re	Received by: (Signature)	re) Date/Time
K	Jaran	20	the second	101C	2	22%				
				-		4				

Job Number: 890-2591-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2591 List Number: 1 Creator: Clifton, Cloe

Sample Preservation Verified.

MS/MSDs

<6mm (1/4").

There is sufficient vol. for all requested analyses, incl. any requested

Containers requiring zero headspace have no headspace or bubble is

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 True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) 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

N/A

True

N/A

Eurofins Carlsbad

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Job Number: 890-2591-1 SDG Number: 03E1558056

List Source: Eurofins Midland

List Creation: 07/21/22 10:51 AM

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2591 List Number: 2 Creator: Rodriguez, Leticia

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

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

Received by OCD: 8/19/2022 11:50:23 AM

LINKS

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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: 890-2593-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/27/2022 8:18:15 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com





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

SDG: 03E1558056

Laboratory Job ID: 890-2593-1

# **Table of Contents**

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EDL

LOD

LOQ MCL

MDA

MDC

MDL

ML MPN

MQL NC

ND

NEG

POS

PQL PRES

QC

RER

RL RPD

TEF

TEQ

TNTC

Client: Ensolu	Definitions/Glossary	Job ID: 890-2593-1	
	EU 5E HAN SOLO 105H	SDG: 03E1558056	
Qualifiers			3
GC VOA Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		E
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		8
U	Indicates the analyte was analyzed for but not detected.		
Glossary			9
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
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)		

Estimated Detection Limit (Dioxin)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

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

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

4

5

Job ID: 890-2593-1 SDG: 03E1558056

#### Job ID: 890-2593-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2593-1

#### Receipt

The sample was received on 7/19/2022 3:58 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30263 and analytical batch 880-30484 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

#### GC Semi VOA

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

#### HPLC/IC

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

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

RL

0.00200

0.00200

Unit

mg/Kg

mg/Kg

D

Prepared

07/21/22 13:27

07/21/22 13:27

Job ID: 890-2593-1 SDG: 03E1558056

# **Client Sample ID: SS08**

Date Collected: 07/19/22 13:40 Date Received: 07/19/22 15:58

Sample Depth: 0.5

Client: Ensolum

Analyte

Benzene

Toluene

# Lab Sample ID: 890-2593-1

Analyzed

07/25/22 02:29

07/25/22 02:29

Matrix: Solid

Dil Fac

1

1

5

Chloride			5.04	mg/Kg			07/25/22 00:42	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble						
o-Terphenyl	118		70 - 130			07/25/22 16:23	07/26/22 13:22	1
1-Chlorooctane	106		70 - 130			07/25/22 16:23	07/26/22 13:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 13:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 13:22	1
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 13:22	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015B NM - Diesel Ran								
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 08:23	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aethod: 8015 NM - Diesel Rang	e Organics (DR	O) (GC)						
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/25/22 10:43	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: Total BTEX - Total BTE	X Calculation							
1,4-Difluorobenzene (Surr)	75		70 - 130			07/21/22 13:27	07/25/22 02:29	1
4-Bromofluorobenzene (Surr)	109		70 - 130			07/21/22 13:27	07/25/22 02:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Kylenes, Total	<0.00399	U	0.00399	mg/Kg		07/21/22 13:27	07/25/22 02:29	1
o-Xylene	< 0.00200		0.00200	mg/Kg		07/21/22 13:27	07/25/22 02:29	1
n-Xylene & p-Xylene	< 0.00399		0.00399	mg/Kg		07/21/22 13:27	07/25/22 02:29	1
Ethylbenzene	< 0.00200		0.00200	mg/Kg		07/21/22 13:27	07/25/22 02:29	1
	-0.00000		0.00000	····		07/04/00 40:07	07/05/00 00.00	

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Job ID: 890-2593-1 SDG: 03E1558056

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

Matrix: Solid

Client: Ensolum

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-2588-A-1-D MS	Matrix Spike	124	86	
890-2588-A-1-E MSD	Matrix Spike Duplicate	96	94	
390-2593-1	SS08	109	75	
CS 880-30263/1-A	Lab Control Sample	107	93	
.CSD 880-30263/2-A	Lab Control Sample Dup	105	92	
/IB 880-30263/5-A	Method Blank	103	84	
//B 880-30478/5-A	Method Blank	98	86	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
0-A-18-D MS	Matrix Spike	88	94	
80-A-18-E MSD	Matrix Spike Duplicate	85	92	
3-1	SS08	106	118	
30622/2-A	Lab Control Sample	102	114	
80-30622/3-A	Lab Control Sample Dup	91	104	
80-30622/1-A	Method Blank	98	110	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: MB 880-30263/5-A

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

Matrix: Solid						Chefit Sa	Prep Type: 1	
Analysis Batch: 30484							Prep Batch	n: <b>30263</b>
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 13:27	07/25/22 01:06	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/21/22 13:27	07/25/22 01:06	1
1,4-Difluorobenzene (Surr)	84		70 - 130			07/21/22 13:27	07/25/22 01:06	1
Lab Sample ID: LCS 880-3026	3/1-A				c	Client Sample I	D: Lab Control	Sample

#### Lab Sample ID: LCS 880-30263/1-A Matrix: Solid

#### Analysis Batch: 30484

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1021		mg/Kg		102	70 - 130	
Toluene	0.100	0.1045		mg/Kg		104	70 - 130	
Ethylbenzene	0.100	0.1094		mg/Kg		109	70 - 130	
m-Xylene & p-Xylene	0.200	0.2212		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1237		mg/Kg		124	70 - 130	

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

#### Lab Sample ID: LCSD 880-30263/2-A

#### Matrix: Solid

Analysis Batch: 30484							Prep	Batch:	30263
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08838		mg/Kg		88	70 - 130	14	35
Toluene	0.100	0.09280		mg/Kg		93	70 - 130	12	35
Ethylbenzene	0.100	0.09635		mg/Kg		96	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1949		mg/Kg		97	70 - 130	13	35
o-Xylene	0.100	0.1089		mg/Kg		109	70 - 130	13	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

# Lab Sample ID: 890-2588-A-1-D MS

#### Matrix: Solid aluaia Batahi 20494

Analysis Batch: 30484									Prep E	Batch: 30263
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F2 F1	0.100	0.02542	F1	mg/Kg		25	70 - 130	
Toluene	<0.00200	U F1	0.100	0.03588	F1	mg/Kg		34	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

5 6 7

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Batch: 30263

Client Sample ID: Method Blank

Job ID: 890-2593-1

MS MS

0.04162 F1

0.08704 F1

0.05151 F1

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.100

0.200

0.100

Limits

70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 890-2588-A-1-D MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 30484

Sample Sample

<0.00200 U F2 F1

<0.00399 U F2 F1

<0.00200 U F2 F1

MS MS

Qualifier

%Recovery

124

86

**Result Qualifier** 

Job ID: 890-2593-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Batch: 30263

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

41

43

51

D

# 2 3 4 5 6 7 8 9 10 11

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

#### Matrix: Solid Analysis Batch: 30484

Lab Sample ID: 890-2588-A-1-E MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 30484									Prep	Batch:	30263	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00200	U F2 F1	0.0990	0.01645	F2 F1	mg/Kg		17	70 - 130	43	35	
Toluene	<0.00200	U F1	0.0990	0.02796	F1	mg/Kg		27	70 - 130	25	35	Ē
Ethylbenzene	<0.00200	U F2 F1	0.0990	0.02785	F2 F1	mg/Kg		27	70 - 130	40	35	
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.198	0.05748	F2 F1	mg/Kg		28	70 - 130	41	35	÷
o-Xylene	<0.00200	U F2 F1	0.0990	0.03580	F2 F1	mg/Kg		36	70 - 130	36	35	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

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

#### Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 30478

	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/23/22 18:30	07/24/22 14:29	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			07/23/22 18:30	07/24/22 14:29	1
1,4-Difluorobenzene (Surr)	86		70 - 130			07/23/22 18:30	07/24/22 14:29	1

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

Lab Sample ID: MB 880-30622/1-A Matrix: Solid Analysis Batch: 30645	MB MB				Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Total/NA
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0 U	50.0	mg/Kg		07/25/22 16:23	07/26/22 09:44	1
(GRO)-C6-C10							

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Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

#### Method: 8015B NM - Die

lethod: 8015B NM - Diesel I	Range Or	gan	ics (DR	O) (GC) (C	ontinue	ed)							
Lab Sample ID: MB 880-30622/1- Matrix: Solid Analysis Batch: 30645	-A									Client Sa	ample ID: M Prep Ty Prep		tal/NA
A	Ba	MB		Б		Uni		<b>n</b>	Б	norod	Apolyz	- A	Dil Fac
Analyte		50.0	Qualifier	<b>R</b> 50.		Uni		<u>D</u>		repared 5/22 16:23	Analyze		DII Fac
Diesel Range Organics (Over C10-C28)		50.0	0	50.	0	mg/	кg		01/2	5/22 10.25	01/20/22 0	9.44	1
Oll Range Organics (Over C28-C36)	<	50.0	U	50.	0	mg/	Кg		07/2	5/22 16:23	07/26/22 0	9:44	1
		мв	МВ										
Surrogate	%Recov		Qualifier	Limits					D	repared	Analyze	nd	Dil Fac
1-Chlorooctane	%Reco	98	Quaimer		_					5/22 16:23			1 DII Fac
o-Terphenyl		30 110		70 - 130						5/22 16:23			1
		110		10-100					01/2	0/22 10.20	017207220	<b>9</b> .77	,
Lab Sample ID: LCS 880-30622/2	2-A							CI	lient	Sample	ID: Lab Co	ntrol S	ample
Matrix: Solid											Prep T	ype: To	tal/NA
Analysis Batch: 30645											Prep	Batch:	30622
				Spike	LCS	LCS					%Rec		
Analyte				Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics				1000	957.4		mg/Kg		_	96	70 - 130		
(GRO)-C6-C10													
Diesel Range Organics (Over				1000	926.5		mg/Kg			93	70 - 130		
C10-C28)													
	LCS	LCS											
Surrogate	-	Qual	ifier	Limits									
1-Chlorooctane	102			70 - 130									
o-Terphenyl	114			70 - 130									
Lab Sample ID: LCSD 880-30622	0/2 A						0	ont -	<b>6</b>		ab Control	Same	
Matrix: Solid	./ <b>J-A</b>						Cil	ent	Sam	ipie iD. L	Prep T		
Analysis Batch: 30645												Batch:	
Analysis Datch. 30043				Spike	LCSD	LCSD					%Rec	Daten.	RPD
Analyte				Added		Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Gasoline Range Organics				1000	988.4		mg/Kg		_	99 -	70 - 130	3	20
(GRO)-C6-C10													
Diesel Range Organics (Over				1000	863.8		mg/Kg			86	70 - 130	7	20
C10-C28)													
	LCSD	LCSI	,										
Surrogate		Quali		Limits									
1-Chlorooctane	91			70 - 130									

#### o-Terphenyl 104 Lab Sample ID: 880-17280-A-18-D MS

Matrix: Solid

Analysis Batch: 30645									Pre	p Batch: 30622
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<50.0	U	1000	1163		mg/Kg		116	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<50.0	U	1000	789.8		mg/Kg		79	70 - 130	
C10-C28)										

70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	94		70 - 130

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**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Job ID: 890-2593-1 SDG: 03E1558056

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Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2593-1 SDG: 03E1558056

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

Lab Sample ID: 880-17280-A-1 Matrix: Solid								-	): Matrix Sp Prep 1	Type: To	
Analysis Batch: 30645										Batch:	
Analysis Baton. 00040	Sample	Sample	Spike	MSD	MSD				%Rec	Batom	RPE
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics	<50.0		999	1054		mg/Kg		106	70 - 130	10	2
(GRO)-C6-C10	-00.0	0	000	1001		mg/rtg		100	10-100	10	2.
Diesel Range Organics (Over C10-C28)	<50.0	U	999	773.5		mg/Kg		77	70 - 130	2	2
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	85		70 - 130								
o-Terphenyl	92		70 - 130								
lethod: 300.0 - Anions, lo Lab Sample ID: MB 880-30245 Matrix: Solid Analysis Batch: 30486		ography						Client S	ample ID: Prep	Method Type: So	
-		MB MB									
Analyte	Re	esult Qualifier		RL	Unit	[	) Р	repared	Analyz	ed	Dil Fa
Chloride	<	5.00 U		5.00	mg/K	g			07/24/22	23:00	
Matrix: Solid	5/2-A								ID: Lab Co Prep	Type: So	
Matrix: Solid Analysis Batch: 30486 <sup>Analyte</sup>			Spike Added	Result	LCS Qualifier	Unit	D	%Rec	Prep %Rec Limits		
Matrix: Solid Analysis Batch: 30486 <sup>Analyte</sup>								-	Prep %Rec		
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid			Added	Result		Unit mg/Kg	D	<b>%Rec</b> 106	Prep %Rec Limits 90 - 110	Type: So	olub e Du
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid			Added 250	Result 264.1	Qualifier	Unit mg/Kg	D	<b>%Rec</b> 106	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: So  ol Sampl	e Du olub
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486			Added 250 Spike	Result 264.1 LCSD	Qualifier	Unit mg/Kg Cliet	D	%Rec 106 aple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: So  ol Sampl Type: So	e Du olubi RP
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Analyte			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	Unit mg/Kg Clies Unit	D	%Rec 106 aple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	Type: So ol Sampl Type: So 	e Du olub olub RP Lim
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Analyte			Added 250 Spike	Result 264.1 LCSD	Qualifier	Unit mg/Kg Cliet	D	%Rec 106 aple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: So  ol Sampl Type: So	e Du olub olub RP Lim
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid	245/3-A		Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	Unit mg/Kg Clies Unit	D	%Rec 106 pple ID: 1 %Rec 106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: So ol Sampl Type: So <u>RPD</u> 1	e Du olubi RP Lim 2 Spik
Lab Sample ID: LCS 880-3024 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid Analysis Batch: 30486	245/3-A		Added 250 Spike Added 250	Result 264.1 LCSD Result	Qualifier	Unit mg/Kg Clies Unit	D	%Rec 106 pple ID: 1 %Rec 106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: So ol Sampl Type: So <u></u> 1 : Matrix	e Du olubi RP Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid	245/3-A		Added 250 Spike Added	Result 264.1 LCSD Result 265.5	Qualifier	Unit mg/Kg Clies Unit	D	%Rec 106 pple ID: 1 %Rec 106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: So ol Sampl Type: So <u></u> 1 : Matrix	e Du olubi RP Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid	245/3-A I-B MS Sample	Sample Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier	Unit mg/Kg Clies Unit	D	%Rec 106 mple ID: I %Rec 106 Client	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	Type: So ol Sampl Type: So <u></u> 1 : Matrix	e Du olubi RP Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid Analysis Batch: 30486 Analyte	245/3-A I-B MS Sample	-	Added 250 Spike Added 250 Spike	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier MS	Unit mg/Kg Clies Unit mg/Kg	D	%Rec 106 mple ID: I %Rec 106 Client	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	Type: So ol Sampl Type: So <u></u> 1 : Matrix	e Du olubi RP Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid Analysis Batch: 30486	245/3-A I-B MS Sample Result 948	Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg Unit mg/Kg	D	%Rec           106           aple ID: I           %Rec           106           Client           %Rec           91	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	Type: So Sampl Type: So <u>RPD</u> 1 : Matrix Type: So	e Du olubl RP Lim 2 Spik olubl
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-302 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid Analyte Chloride Lab Sample ID: 880-17194-A-1 Matrix: Solid	245/3-A I-B MS Sample Result 948 I-C MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 1174	Qualifier LCSD Qualifier MS	Unit mg/Kg Unit mg/Kg	D	%Rec           106           aple ID: I           %Rec           106           Client           %Rec           91	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	Type: So Sampl Type: So <u>RPD</u> 1 : Matrix Type: So Dike Dup	e Du olubi RP Lim 2 Spik olubi

Released to Imaging: 11/23/2022 1:52:32 PM

# **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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Job ID: 890-2593-1 SDG: 03E1558056

## GC VOA

#### Prep Batch: 30263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2593-1	SS08	Total/NA	Solid	5035	
MB 880-30263/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	5035	
_CSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2588-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2588-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
rep Batch: 30478					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

# Lab Sample ID Client Sample ID Prep Type MB 880-30478/5-A Method Blank Total/NA

#### Analysis Batch: 30484

_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2593-1	SS08	Total/NA	Solid	8021B	30263
MB 880-30263/5-A	Method Blank	Total/NA	Solid	8021B	30263
MB 880-30478/5-A	Method Blank	Total/NA	Solid	8021B	30478
CS 880-30263/1-A	Lab Control Sample	Total/NA	Solid	8021B	30263
_CSD 880-30263/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30263
390-2588-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30263
390-2588-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30263

Solid

5035

#### Analysis Batch: 30554

1	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
1	890-2593-1	SS08	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Prep Batch: 30622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2593-1	SS08	Total/NA	Solid	8015NM Prep	
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2593-1	SS08	Total/NA	Solid	8015B NM	30622
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015B NM	30622
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30622
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30622
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30622
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30622
Analysis Batch: 30752					
	Client Comple ID	Dren Tune	Matrix	Mathad	Dren Detek

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2593-1	SS08	Total/NA	Solid	8015 NM	

# **QC** Association Summary

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

HPLC/IC

#### Leach Batch: 30245

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
90-2593-1	SS08	Soluble	Solid	DI Leach	
/IB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach	
CS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
CSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
380-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 30486					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
90-2593-1	SS08	Soluble	Solid	300.0	30245
/IB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
-CS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
CSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
380-17194-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30245
380-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2593-1	SS08	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30245
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

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Job ID: 890-2593-1 SDG: 03E1558056

Job ID: 890-2593-1 SDG: 03E1558056

#### Lab Sample ID: 890-2593-1 Matrix: Solid

Client Sample ID: SS08 Date Collected: 07/19/22 13:40 Date Received: 07/19/22 15:58

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30263	07/21/22 13:27	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30484	07/25/22 02:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30554	07/25/22 10:43	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30752	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 13:22	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 00:42	СН	XEN MID

#### Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 11/23/2022 1:52:32 PM

	-		,		
Client: Ensolum Project/Site: BEU 5E HAN	SOLO 105H			Job ID: 890-2593-1 SDG: 03E1558056	
Laboratory: Eurofins	Midland				
Unless otherwise noted, all analyte	es for this laboratory we	re covered under each acci	editation/certification below.		
Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	NE	ELAP	T104704400-22-24	06-30-23	E
The following analytes are ir	ncluded in this report, bu	It the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for which	5
the agency does not offer ce					
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					3
					10
					12
					13

Eurofins Carlsbad

#### Job ID: 890-2593-1 SDG: 03E1558056

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:

Client: Ensolum

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

5
8
9
1
2
3

Eurofins Carlsbad

# Sample Summary

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2593-1 SDG: 03E1558056

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-2593-1	SS08	Solid	07/19/22 13:40	07/19/22 15:58		4
						5
						8
						9
						12
						19

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Bill to: (f different)     Garrett Green       Expensiv Name:     XTO Energy. Inc.       Company Name:     XTO Energy. Inc.       Address:     S104 E. Green Street       Reporting:     Carrett Green       Final:     Inc.       Address:     S104 E. Green Street       Reporting:     Carret Green       Final:     Define:       ID5H     Turn Atound       ID5H     Turn Atound       Int.     Reporting: Level II       ID5H     Turn Atound       ID5H     Anal-YSIS REOLEST       ID5H     Anal-YSIS REOLEST       ID5H     Anal-YSIS REOLEST       Int.     Parameter ID:       Interestive divisioned by 4.30m     Beoph Greek # 00       Interestive frameworker     Define:       Int.     Anal-YSIS REOLEST       Interestive frameworker     Define:
Company Name:     Company Name:     Company Name:     Company Name:       Address:     XTO Energy, Inc.     Address:     XTO Energy, Inc.       Address:     Address:     2104 E. Carisbaci, NM 88220     State of Project:       Email [bealific]ensolum.com     Email [bealific]ensolum.com     State of Project:       Email [bealific]ensolum.com     Email [bealific]ensolum.com     Address:       IO5H     Turn Around     Free       M     Due Date:     Address:       M     No     Markisis       M     Due Date:     Address:       M     Due Date:     Address: <tr< th=""></tr<>
Address:     3104 E. Green Street     State of Project:       City, State ZP:     Carisbad, NM 88220       Email:     Deliti@ensolum .com       Email:     Deliti@ensolum .com       MM     Due Date:       MM     Due Competitive       Mateice:     Zarabised       MM     Due Competive       Mateice:     Zar
Cly, State 2IP:     Carisbad, NM B8220       Email: Ibelit@ensolum.com       Enail: Ibelit@ensolum.com       Turn Atound       Turn Atound     Turn Atound       M     Due Date:     Date       M     Date     Time       M     O.S.     Graph       M     O.S.     Graph       M     O.S.     Graph
Email:     Debetili@ensolum.com       Turn Around     Turn Around       Turn Around     Turn Around       Due Date:     Routine       Due Date:     Routine       No     Wet Ics:       Vo     Wet Ics:       On Factor:
Turn Around     Turn Around       Image: Construct of the starts in day received by 4:30m     Parameters       Image: Construct of the lab, if received by 4:30m     ANALYSIS REQUEST       Image: Construct of the lab, if received by 4:30m     ANALYSIS REQUEST       Image: Construct of the lab, if received by 4:30m     ANALYSIS REQUEST       Image: Construct of the lab, if received by 4:30m     ANALYSIS REQUEST       Image: Construct of the lab, if received by 4:30m     Parameters       Image: Construct of the lab, if received by 4:30m     Parameters       Image: Construct of the lab, if received by 4:30m     Parameters       Image: Construct of the lab, if received by 4:30m     Parameters       Image: Construct of the lab
Image: Second state of the second by the law, the law, the law, the law, t
Due Date:       Tars starts the day received by 4.30pm       Tars starts the day received by 4.30pm       No     Wet Los:       No     Wet Los:       Annoter ID:       Control Factor:
The tab, in received by 4.30pm       Termoneter 1D:       Thermometer 1D:       Thermometer 1D:       Correction Factor:       Corrected Temperature:       And the factor:       Date       Time       Date       Date       Date       Date </td
Termonater ID:     Thrv. Col       Termonater ID:     Thrv. Col       Correction Factor:     -0.5       Termperatures     3.00       Sampled     Sampled       Sampled     Sampled       Sampled     Sampled       Sampled     Sampled
Date     Time     Date     Time       0.5     Grab/     1     X       119/2022     0.5'     Grab/     1       119/2022     0.5'     Grab/     1
Temperature Reading:     3     3       Corrected Temperature:     3     5       Date     Time     Depth     Garbb # of       Date     Time     Depth     Garbb # of       7/19/2022     3     3     3       7/19/2022     3     4     5
Date       Time       Orabi       # of       Comp       Cont       Here       Depth       Comp       Cont       Here       N
0.5' Grab/ 1 X X X 0.5' Grab/ 1 X X X 0.6' C C C C C C C C C C C C C C C C C C C
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Image: Second
Incident ID:NAPP2209731445
Incident ID:NAPP2209731445

Job Number: 890-2593-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2593 List Number: 1 Creator: Clifton, Cloe

Login Number: 2593		List Soi	urce: Eurofins Carlsbad	
List Number: 1				5
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			8
Samples were received on ice.	True			
Cooler Temperature is acceptable.	True			9
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		i.	3
Sample containers have legible labels.	True		1	14
Containers are not broken or leaking.	True		-	
Sample collection date/times are provided.	True			
Appropriate sample containers are used.	True			
Sample bottles are completely filled.	True			
Sample Preservation Verified.	N/A			
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True			

N/A

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

#### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2593 List Number: 2 Creator: Rodriguez, Leticia

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

Job Number: 890-2593-1 SDG Number: 03E1558056

List Source: Eurofins Midland 5 6 7 8 9 10 11 12 13 List Creation: 07/21/22 10:51 AM

Received by OCD: 8/19/2022 11:50:23 AM

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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: 890-2596-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/27/2022 9:33:21 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

SDG: 03E1558056

Laboratory Job ID: 890-2596-1

# **Table of Contents**

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LOD

LOQ MCL

MDA

MDC

MDL

ML MPN

MQL NC

ND

NEG

POS

PQL PRES

QC

RER

RL RPD

TEF

TEQ

TNTC

	Definitions/Glossary		
Client: Ensolu		Job ID: 890-2596-1	
Project/Site: B	EU 5E HAN SOLO 105H	SDG: 03E1558056	
Qualifiers			
GC VOA Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		1
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)		

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

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

4

5

#### Job ID: 890-2596-1 SDG: 03E1558056

#### Job ID: 890-2596-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2596-1

#### Receipt

The sample was received on 7/19/2022 3:58 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30562 and analytical batch 880-30657 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

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

#### HPLC/IC

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

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

RL

Unit

D

Prepared

Job ID: 890-2596-1 SDG: 03E1558

# **Client Sample ID: FS01**

Date Collected: 07/19/22 12:05 Date Received: 07/19/22 15:58

Sample Depth: 1

Analyte

Client: Ensolum

# Lab Sample ID: 890-259

Analyzed

Matrix: S

58056	2
<b>596-1</b> : Solid	3
	4
	5
Dil Fac	6
1	7
1 1	8
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	14
Dil Fac	

Analyte	Result	Quanner		Unit		riepaieu	Analyzeu	Dirrac	
Benzene	<0.00199	U	0.00199	mg/Kg		07/26/22 09:25	07/26/22 13:45	1	6
Toluene	<0.00199	U	0.00199	mg/Kg		07/26/22 09:25	07/26/22 13:45	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/26/22 09:25	07/26/22 13:45	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/26/22 09:25	07/26/22 13:45	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/26/22 09:25	07/26/22 13:45	1	9
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/26/22 09:25	07/26/22 13:45	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	9
4-Bromofluorobenzene (Surr)	106		70 - 130			07/26/22 09:25	07/26/22 13:45	1	
1,4-Difluorobenzene (Surr)	87		70 - 130			07/26/22 09:25	07/26/22 13:45	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			07/26/22 15:53	1	
– Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	- · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 08:23	1	
– Method: 8015B NM - Diesel Rang	pe Organics (D	RO) (GC)							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 14:06	1	
(GRO)-C6-C10	40.0		10.0						
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 14:06	1	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 14:06	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	85		70 _ 130			07/25/22 16:23	07/26/22 14:06	1	
o-Terphenyl	98		70 - 130			07/25/22 16:23	07/26/22 14:06	1	
_ Method: 300.0 - Anions, Ion Chro	omatography -	Soluble							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	284		4.97	mg/Kg			07/25/22 00:57	1	

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7/27/2022

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

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-17132-A-4-F MS	Matrix Spike	103	95	
880-17132-A-4-G MSD	Matrix Spike Duplicate	110	96	
890-2596-1	FS01	106	87	
890-2603-A-1-D MS	Matrix Spike	103	85	
890-2603-A-1-E MSD	Matrix Spike Duplicate	107	92	
LCS 880-30562/1-A	Lab Control Sample	106	94	
CS 880-30664/1-A	Lab Control Sample	105	95	
_CSD 880-30562/2-A	Lab Control Sample Dup	104	94	
_CSD 880-30664/2-A	Lab Control Sample Dup	108	98	
MB 880-30562/5-A	Method Blank	90	84	
MB 880-30664/5-A	Method Blank	100	87	
Surrogate Legend				
BFB = 4-Bromofluorober	izene (Surr)			
DFBZ = 1,4-Difluorobenz	zene (Surr)			

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

#### Matrix: Solid

-			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17280-A-18-D MS	Matrix Spike	88	94
880-17280-A-18-E MSD	Matrix Spike Duplicate	85	92
890-2596-1	FS01	85	98
LCS 880-30622/2-A	Lab Control Sample	102	114
LCSD 880-30622/3-A	Lab Control Sample Dup	91	104
MB 880-30622/1-A	Method Blank	98	110

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-2596-1

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#### Prep Type: Total/NA

Lab Sample ID: MB 880-30562/5-A

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

Matrix: Solid Analysis Batch: 30657							Prep Type: 1 Prep Batch	
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/25/22 10:57	07/26/22 22:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/25/22 10:57	07/26/22 22:37	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/25/22 10:57	07/26/22 22:37	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/25/22 10:57	07/26/22 22:37	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130			07/25/22 10:57	07/26/22 22:37	1
1,4-Difluorobenzene (Surr)	84		70 - 130			07/25/22 10:57	07/26/22 22:37	1

#### Lab Sample ID: LCS 880-30562/1-A Matrix: Solid

#### Analysis Batch: 30657

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09490		mg/Kg		95	70 - 130	
Toluene	0.100	0.09745		mg/Kg		97	70 - 130	
Ethylbenzene	0.100	0.1000		mg/Kg		100	70 - 130	
m-Xylene & p-Xylene	0.200	0.2002		mg/Kg		100	70 - 130	
o-Xylene	0.100	0.1107		mg/Kg		111	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

#### Lab Sample ID: LCSD 880-30562/2-A

# Matrix: Solid

L	Analysis Batch: 30657							Prep	Batch:	30562
		Spike	LCSD	LCSD				%Rec		RPD
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
L	Benzene	0.100	0.1003		mg/Kg		100	70 - 130	6	35
	Toluene	0.100	0.1020		mg/Kg		102	70 - 130	5	35
L	Ethylbenzene	0.100	0.1039		mg/Kg		104	70 - 130	4	35
	m-Xylene & p-Xylene	0.200	0.2077		mg/Kg		104	70 - 130	4	35
	o-Xylene	0.100	0.1145		mg/Kg		114	70 - 130	3	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

# Lab Sample ID: 890-2603-A-1-D MS

# Matrix: Solid

Analysis Batch: 30657									Prep	Batch: 30562
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1 F2	0.101	0.03049	F1	mg/Kg		30	70 - 130	
Toluene	<0.00201	U F1 F2	0.101	0.03834	F1	mg/Kg		37	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Method Blank** 

## Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep	Batch:	30562

<b>Released to Imaging:</b>	11/23/2022 1:52:32 PM

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 890-2603-A	-1-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 30657									Prep	Batch:	30562
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1 F2	0.101	0.01617	F1	mg/Kg		16	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.202	0.08284	F1	mg/Kg		40	70 - 130		
o-Xylene	<0.00201	U F1 F2	0.101	0.04972	F1	mg/Kg		49	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	103		70 - 130								
1,4-Difluorobenzene (Surr)	85		70 - 130								
Lab Sample ID: 890-2603-A	-1-E MSD					Cli	ent S	ample IC	): Matrix S	pike Duj	olicate
Matrix: Solid										Гуре: То	
Analysis Batch: 30657										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1 F2	0.100	0.07677	F2	mg/Kg		77	70 - 130	86	35
Toluene	<0.00201	U F1 F2	0.100	0.08242	F2	mg/Kg		81	70 - 130	73	35
Ethylbenzene	<0.00201	U F1 F2	0.100	0.08472	F2	mg/Kg		85	70 - 130	136	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.1719	F2	mg/Kg		85	70 - 130	70	35
o-Xylene	<0.00201	U F1 F2	0.100	0.09434	F2	mg/Kg		94	70 - 130	62	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	107		70 - 130								
1,4-Difluorobenzene (Surr)	92		70 - 130								
Lab Sample ID: MB 880-306	64/5-A							Client S	Sample ID:	Method	Blank
Matrix: Solid										Гуре: То	
Analysis Batch: 30657										Batch:	
· · · · · · · · · · · · · · · · · · ·		MB MB									

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 09:25	07/26/22 12:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 09:25	07/26/22 12:01	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 09:25	07/26/22 12:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/26/22 09:25	07/26/22 12:01	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

#### Lab Sample ID: LCS 880-30664/1-A Matrix: Solid Analysis Batch: 30657

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.100	0.09358		mg/Kg		94	70 - 130
Toluene	0.100	0.09382		mg/Kg		94	70 - 130
Ethylbenzene	0.100	0.09803		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.1983		mg/Kg		99	70 - 130

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Prep Type: Total/NA

Prep Batch: 30664

07/26/22 09:25 07/26/22 12:01

07/26/22 12:01

Client Sample ID: Lab Control Sample

07/26/22 09:25

5

7

#### Released to Imaging: 11/23/2022 1:52:32 PM

1

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: LCS 880-30664/1-A

Matrix: Solid

Analysis Batch: 30657

Job ID: 890-2596-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Batch: 30664

**Client Sample ID: Lab Control Sample** 

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

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
o-Xylene			0.100	0.1073		mg/Kg		107	70 - 130		
	1.00	1.00									
Sumerate	LCS		Lingita								
Surrogate 4-Bromofluorobenzene (Surr)	% <b>Recovery</b> 105	Qualifier	Limits 70 - 130								
1,4-Difluorobenzene (Surr)	95		70 - 130 70 - 130								
r,+-Dindorobenzene (Surr)	30		70 - 730								
Lab Sample ID: LCSD 880-3	0664/2-A					Clier	nt Sam	nple ID:	Lab Contro	ol Sample	e Dur
Matrix: Solid										· Fype: Tot	
Analysis Batch: 30657									Prep	Batch:	30664
			Spike	LCSD	LCSD				%Rec		RP
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.09765		mg/Kg		98	70 - 130	4	35
Toluene			0.100	0.09676		mg/Kg		97	70 - 130	3	35
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2052		mg/Kg		103	70 - 130	3	35
o-Xylene			0.100	0.1117		mg/Kg		112	70 - 130	4	35
	1.050	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)		Quaimer	70 - 130								
	100		10 - 150								
	98		70 130								
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid	98 <b>A-4-F MS</b>		70 - 130					Client		Type: Tot	tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid	A-4-F MS	Sample	70 - 130 Spike	MS	MS			Client	Prep T		tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte	A-4-F MS Sample	Sample Qualifier			MS Qualifier	Unit	<u>D</u>	Client %Rec	Prep T Prep	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657	A-4-F MS Sample Result	Qualifier	Spike			_ <mark>Unit</mark> mg/Kg	<u>D</u>		Prep T Prep %Rec	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene	A-4-F MS Sample Result	Qualifier	Spike Added	Result			<u>D</u>	%Rec	Prep 1 Prep %Rec Limits	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-A Matrix: Solid Analysis Batch: 30657 Analyte	A-4-F MS Sample 	Qualifier U U	Spike Added 0.100	<b>Result</b> 0.08215		mg/Kg	D	%Rec 82	Prep T Prep %Rec Limits 70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene	A-4-F MS Sample Result <0.00201 <0.00201	Qualifier U U U	<b>Spike</b> Added 0.100 0.100	<b>Result</b> 0.08215 0.07761		mg/Kg mg/Kg	D	%Rec 82 77	Prep T Prep %Rec Limits 70 - 130 70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201	Qualifier U U U U U	Spike Added 0.100 0.100 0.100	Result 0.08215 0.07761 0.07428		mg/Kg mg/Kg mg/Kg	<u> </u>	%Rec 82 77 74	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201	Qualifier U U U U U U	Spike Added 0.100 0.100 0.100 0.200	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<mark>%Rec</mark> 82 77 74 74	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.200           0.100	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<mark>%Rec</mark> 82 77 74 74	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery	Qualifier U U U U U U	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.200           0.100           Limits	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg	D	<mark>%Rec</mark> 82 77 74 74	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 103	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<mark>%Rec</mark> 82 77 74 74	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/N/
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.200           0.100           Limits	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<mark>%Rec</mark> 82 77 74 74	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot	tal/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 103 95	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 82 77 74 74 81	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot Batch: : 	tal/N/ 30664
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 103 95	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 82 77 74 74 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: : 	tal/NA 30664
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 103 95	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	Result           0.08215           0.07761           0.07428           0.1476		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 82 77 74 74 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: : 	tal/NA 30664
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid	A-4-F MS	Qualifier U U U U U U MS	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.200           0.100           Limits           70 - 130	Result 0.08215 0.07761 0.07428 0.1476 0.08083		mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 82 77 74 74 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: Tot Batch: : 	blicate al/NA 30664
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00201 <0.00201 MS %Recovery 103 95 A-4-G MSD Sample Result	Qualifier UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	Spike           Added           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           0.200           0.100           0.200           0.100           0.200           0.100           Description           70 - 130           70 - 130	Result 0.08215 0.07761 0.07428 0.1476 0.08083	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 82 77 74 74 81	Prep T Prep %Rec Limits 70 - 130 70 - 130	Type: Tot Batch: : 	blicate tal/NA 30664 tal/NA 30664 RPI
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte	A-4-F MS Sample Result <ul> <li>&lt;0.00201</li> <li>&lt;0.00201</li></ul>	Qualifier UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	Spike           Added           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           0.200           0.100           0.200           0.100           Description           Description           0.100           Limits           70 - 130           70 - 130           Spike	Result 0.08215 0.07761 0.07428 0.1476 0.08083	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec 82 77 74 74 81	Prep T Prep %Rec Limits 70 - 130 70 - 190 70 - 130 70 - 190 70 - 1	Dike Dup Dike Dup Dype: Tot Diatch: 3	blicate tal/NA 30664 tal/NA 30664 RPI Limi
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene	A-4-F MS Sample Result <0.00201 <0.00201 <0.00201 <0.00201 <0.00201 MS %Recovery 103 95 A-4-G MSD Sample Result	Qualifier U U U U U MS Qualifier Qualifier U	Spike           Added           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           Description           Description           Description           Description           Description           Description           Description           Description           Spike           Added	Result           0.08215           0.07761           0.07428           0.1476           0.08083	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient Sa	%Rec 82 77 74 74 81	Prep T Prep %Rec Limits 70 - 130 70 - 190 70 - 130 70 - 190 70 - 1	Dike Dup Dike Dup Dype: Tot Datch: 3	blicate tal/NA 30664 tal/NA 30664 RPE Limi 36
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	A-4-F MS           Sample           Result           <0.00201	Qualifier U U U U U U MS Qualifier U U U	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           0.200           0.100           D.100           D.100           D.100           D.100           D.100           D.0998	Result           0.08215           0.07761           0.07428           0.1476           0.08083	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg CI	ient Sa	%Rec           82           77           74           74           81	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 Prep 7 Prep 7 %Rec Limits 70 - 130	Dike Dup Type: Tot Dige: T	blicate tal/NA 30664 tal/NA 30664 RPE Limi 35 35
1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17132-4 Matrix: Solid Analysis Batch: 30657 Analyte Benzene Toluene	A-4-F MS Sample Result <ul> <li>&lt;0.00201</li> <li>&lt;0.00201</li> <li>&lt;0.00201</li> <li>&lt;0.00402</li> <li>&lt;0.00201</li> <li><i>MS</i></li> <li><i>%Recovery</i></li> <li>103</li> <li>95</li> </ul> A-4-G MSD Sample <ul> <li>Result</li> <li>&lt;0.00201</li> <li>&lt;0.00201</li> </ul>	Qualifier U U U U U U U MS Qualifier U U U U	Spike           Added           0.100           0.100           0.100           0.100           0.100           0.100           0.100           0.100           0.100           0.100           0.100           0.100           Limits           70 - 130           70 - 130           Spike           Added           0.0998           0.0998	Result           0.08215           0.07761           0.07428           0.1476           0.08083           MSD           Result           0.08953           0.08606	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	ient Sa	%Rec           82           77           74           74           81	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 %Rec Limits 70 - 130 70 - 130	Dike Dup Type: Tot Dike Dup Type: Tot District State District Stat	tal/NA 30664

Eurofins Carlsbad
Client: Ensolum

## **QC Sample Results**

Job ID: 890-2596-1 SDG: 03E1558056

## Project/Site: BEU 5E HAN SOLO 105H Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-17132-A-4 Matrix: Solid	-G MSD					(	Client	Sample ID:	Matrix Spike Prep Type		
Analysis Batch: 30657									Prep Ba	tch: 3	30664
	MSD M	sn									
Surrogate		Jalifier	Limits								
4-Bromofluorobenzene (Surr)			70 - 130								
1,4-Difluorobenzene (Surr)	96		70 - 130								
Nethod: 8015B NM - Diese	I Range Orga	anics (DF	(GC)								
Lab Sample ID: MB 880-30622	/1-A							Client Sa	ample ID: Met	hod l	Blanl
Matrix: Solid									Prep Type	: Tot	tal/N/
Analysis Batch: 30645									Prep Ba	tch: 3	3062
	м	в мв									
Analyte	Resu	It Qualifier	RL		Unit		D	Prepared	Analyzed	I	Dil Fa
Gasoline Range Organics	<50.	0 U	50.0		mg/ł	٢g	07	7/25/22 16:23	07/26/22 09:4	4	
(GRO)-C6-C10											
Diesel Range Organics (Over C10-C28)	<50.	0 U	50.0		mg/ł	ζg	07	7/25/22 16:23	07/26/22 09:4	4	
Oll Range Organics (Over C28-C36)	<50.	0 U	50.0		mg/ł	٢g	07	7/25/22 16:23	07/26/22 09:4	4	
	м	B MB									
Surrogate	%Recover	y Qualifier	Limits					Prepared	Analyzed		Dil Fa
1-Chlorooctane	g	8	70 - 130				07	7/25/22 16:23	07/26/22 09:4	4	
o-Terphenyl	11	0	70 - 130				07	7/25/22 16:23	07/26/22 09:4	4	
Lab Sample ID: LCS 880-30622 Matrix: Solid	2/2-A						Clie	nt Sample	ID: Lab Contr Prep Type	: Tot	tal/N/
Analysis Batch: 30645									Prep Ba	tcn: 3	3062
Analysis			Spike Added		LCS	11		D 0/ Dee	%Rec Limits		
Analyte Gasoline Range Organics			1000 Added	957.4	Qualifier	_ Unit mg/Kg	L	<b>D</b> %Rec 96	70 - 130		
(GRO)-C6-C10			1000	957.4		ilig/Kg		90	70 - 130		
Diesel Range Organics (Over			1000	926.5		mg/Kg		93	70 - 130		
C10-C28)											
	LCS LC	s									
Surrogate	%Recovery Q	ıalifier	Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	114		70 - 130								
Lab Sample ID: LCSD 880-306	22/3-A					Cli	ent Sa	ample ID: L	ab Control Sa	mple	e Dup
Matrix: Solid									Prep Type		
Analysis Batch: 30645									Prep Ba		
			Spike	LCSD	LCSD				%Rec		RPI
Analyte			Added	Result	Qualifier	Unit		D %Rec	Limits F	RPD	Limi
Gasoline Range Organics			1000	988.4		mg/Kg		99	70 - 130	3	2
(GRO)-C6-C10											
Diesel Range Organics (Over C10-C28)			1000	863.8		mg/Kg		86	70 - 130	7	2
	LCSD LC										
Surrogate	%Recovery Q		Limits								
Surrogate 1-Chlorooctane			Limits 70 - 130 70 - 130								

MS MS

1163

789.8

Result Qualifier

Unit

mg/Kg

mg/Kg

D

%Rec

116

79

Spike

Added

1000

1000

Limits 70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 880-17280-A-18-D MS

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

Analysis Batch: 30645

Gasoline Range Organics

Diesel Range Organics (Over

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

Sample Sample

<50.0 U

<50.0 U

88

94

%Recovery

MS MS

Qualifier

Result Qualifier

Prep Type: Total/NA

Prep Batch: 30622

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

	5
	7
	8
	9

Lab Sample ID: 880-17280-A Matrix: Solid Analysis Batch: 30645	A-18-E MSD					CI	ient Sa	ample IC		oike Dup Type: To Batch:	tal/NA
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1054		mg/Kg		106	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	773.5		mg/Kg		77	70 - 130	2	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	92		70 - 130								

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

Lab Sample ID: MB 880-30245/1-A Matrix: Solid Analysis Batch: 30486									Client S	Sample ID: Me Prep Ty		
	МВ	МВ										
Analyte	Result	Qualifier		RL		Unit		DI	Prepared	Analyzed	0	Dil Fac
Chloride	<5.00	U		5.00		mg/K	g			07/24/22 23:	00	1
Lab Sample ID: LCS 880-30245/2-A								Clien	t Sample	ID: Lab Con	trol Sa	mple
Matrix: Solid										Prep Ty	pe: So	luble
Analysis Batch: 30486												
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250		264.1		mg/Kg		106	90 - 110		
Lab Sample ID: LCSD 880-30245/3-A							CI	lient Sar	nple ID:	Lab Control S	ample	Dup
Matrix: Solid										Prep Ty	pe: So	luble
Analysis Batch: 30486											-	
-			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		265.5		mg/Kg		106	90 - 110	1	20

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Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2596-1 SDG: 03E1558056

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

 Lab Sample ID: 880-17194-A-1-B	MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 30486											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	948		250	1174		mg/Kg		91	90 - 110		
- Lab Sample ID: 880-17194-A-1-C	MSD					CI	ient Sa	ample IC	: Matrix S	pike Du	olicate
Matrix: Solid								-	Prep	Type: S	oluble
Analysis Batch: 30486											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	948		250	1184		mg/Kg		94	90 - 110	1	20

## **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

#### **GC VOA**

#### Prep Batch: 30562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
MB 880-30562/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30562/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30562/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2603-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2603-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 30657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2596-1	FS01	Total/NA	Solid	8021B	30664
MB 880-30562/5-A	Method Blank	Total/NA	Solid	8021B	30562
MB 880-30664/5-A	Method Blank	Total/NA	Solid	8021B	30664
LCS 880-30562/1-A	Lab Control Sample	Total/NA	Solid	8021B	30562
LCS 880-30664/1-A	Lab Control Sample	Total/NA	Solid	8021B	30664
LCSD 880-30562/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30562
LCSD 880-30664/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30664
880-17132-A-4-F MS	Matrix Spike	Total/NA	Solid	8021B	30664
880-17132-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30664
890-2603-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30562
890-2603-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30562

#### Prep Batch: 30664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2596-1	FS01	Total/NA	Solid	5035	
MB 880-30664/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30664/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30664/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17132-A-4-F MS	Matrix Spike	Total/NA	Solid	5035	
880-17132-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Lab Sa	ample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-25	96-1	FS01	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Prep Batch: 30622

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2596-1	FS01	Total/NA	Solid	8015NM Prep	
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2596-1	FS01	Total/NA	Solid	8015B NM	30622
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015B NM	30622
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30622
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30622
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30622

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#### Job ID: 890-2596-1 SDG: 03E1558056

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#### Job ID: 890-2596-1 SDG: 03E1558056

## Project/Site: BEU 5E HAN SOLO 105H

## GC Semi VOA (Continued)

Client: Ensolum

## Analysis Batch: 30645 (Continued)

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30622
	Deve Tarre	Markeite	Mathad	Dura Datab
Client Sample ID	Prep Type	Matrix	Method	Prep Batch
FS01	Total/NA	Solid	8015 NM	
	Matrix Spike Duplicate Client Sample ID	Matrix Spike Duplicate     Total/NA       Client Sample ID     Prep Type	Matrix Spike Duplicate     Total/NA     Solid       Client Sample ID     Prep Type     Matrix	Matrix Spike Duplicate     Total/NA     Solid     8015B NM       Client Sample ID     Prep Type     Matrix     Method

#### Leach Batch: 30245

Leach Batch: 30245						8
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	g
890-2596-1	FS01	Soluble	Solid	DI Leach		
MB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach		
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		
Analysis Batch: 30486						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	13
890-2596-1	FS01	Soluble	Solid	300.0	30245	
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245	

#### Analysis Batch: 30486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2596-1	FS01	Soluble	Solid	300.0	30245	
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245	
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245	
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245	
880-17194-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30245	
880-17194-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245	

5

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Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2596-1 SDG: 03E1558056

### Lab Sample ID: 890-2596-1 Matrix: Solid

Date Collected: 07/19/22 12:05 Date Received: 07/19/22 15:58

**Client Sample ID: FS01** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	30664	07/26/22 09:25	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30657	07/26/22 13:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30717	07/26/22 15:53	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30754	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 14:06	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 00:57	СН	XEN MID

#### Laboratory References:

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

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		Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: BEU 5E H	AN SOLO 105H			Job ID: 890-2596-1 SDG: 03E1558056	2
Laboratory: Eurofi Unless otherwise noted, all an		ry were covered under each acc	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
		NELAP rt, but the laboratory is not certif	T104704400-22-24 ied by the governing authority. This list ma	06-30-23 ay include analytes for which	5
the agency does not off Analysis Method	fer certification. <u>Prep Method</u>	Matrix	Analyte		
8015 NM Total BTEX		Solid Solid	Total TPH Total BTEX		
					8
					9
					10
					13

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.

## **Method Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2596-1 SDG: 03E1558056

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**

Job ID: 890-2596-1 SDG: 03E1558056

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-2596-1	FS01	Solid	07/19/22 12:05	07/19/22 15:58	1	4
						5
						8
						9
						12
						13

CUTOTINS     Environment Vestions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Vestions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Vestions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Vestions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Vestions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Environment Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Environment Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Environment Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Monte Testions     Monte Testions     Monte Testions       Monte Testions     Environment Testions     Monte Testions						5	hai	100	Chain of Custody	dy				
recent micro provide the bear of the property of the propective of the property of the proproperty of the property of the property of the property of the p	euro	and the second	onment Te	sting	-	Houston, Aidland, TX EL Paso, T	TX (281) (432) 702 X (915) 5	240-4200, -5440, San 35-3443, Li	Dallas, TX ( Antonio, T) Jbbock, TX	214) 902-0300 ( (210) 509-3334 (806) 794-1296	-	Nork Order	No:	
Montager         Enen Gell         Bits of reference         Contract Careen         Mont control         Mont control           any homes         Encolution         Enco						110000 MM	se le rel		100000			www.xenco.		1 of 1
my Name:         Free Immunities         Mode in Street         Mode in Street         Program (street in Peril IPS)           as:         3122 Mational parts Hvy         Addass:         3104 E. Conn Street         Program (street in Peril IPS)           as:         3122 Mational parts Hvy         Addass:         3104 E. Conn Street         Program (street in Peril IPS)           Amound         Parts Program (street in Parts	Project Manager:	Ben Belill			Bill to: (if d	(fferent)	Garre	t Green				Work On	der Comments	
str         31/22 National parks Hwy         Address         31/04 L Groen Steel         Batto Africania         Batto Africania </td <td>Company Name:</td> <td>Ensolum, LLC</td> <td></td> <td></td> <td>Company</td> <td>Name:</td> <td>XTO</td> <td>inergy, Inc</td> <td>ġ</td> <td></td> <td>Program: UST/P</td> <td>ST DRPD 6</td> <td>3rownfields 🗌 F</td> <td>RC 🗌 Superfund 🗌</td>	Company Name:	Ensolum, LLC			Company	Name:	XTO	inergy, Inc	ġ		Program: UST/P	ST DRPD 6	3rownfields 🗌 F	RC 🗌 Superfund 🗌
Reschort     Carleboard     Reschort     Deniverative:     EDD     Iteration       Reschort     Email Iberitification.com     Email Iberitification.com     Email Iberitification.com     Deniverative:     EDD     ADD       Reschort     EVEN	Address:	3122 National parks	Hwy		Address:		3104	E. Green (	Street		State of Project.			
c.         3989540822         Email (babilitizensoluncom)         Email (babilitizensoluncom)         Deliverations         EDD         Turn Avoined         EDD         Turn Avoined	City, State ZIP:	Carlsbad, NM 88220	C		City, State	ZIP:	Carlsl	ad, NM 8	8220		Reporting: Level			
Refere         EU GE HAN SOLO 105H         Tum Actured         Real         AnALYSIS REQUEST           A Munber:         0051550056         3 Routine	Phone:	9898540852		Email.	bbelil@c	nsolum.c	Ш				Deliverables: EC			ther:
At Number:         O3E1568056         Clonein         Display:         Control Disp	Project Name:	BEU 5E HAN SO	OLO 105H	Tun	Around					ANAL YSIS RE	QUEST		Pres	ervative Codes
I. Location:       EDDY COUNTY, MM       Due Date:         eff's fame:       Comer Shore       Mr. and the diversion of the diversion	Project Number:	03E1558	056	Routine		E C O		-					None: NO	DI Water: H <sub>2</sub> O
Market Bank       Tvt and the day recent of by how wet less       Tvt and the day recent of by how wet less       Tvt and the day recent of by how wet less       Tvt and the day recent of by down         PLE RECERT       Togon Blank       (vg) No       Wet less       (vg) No       Wet less       (vg) No         Be Received by how       Intermediation       No       Control of Fail       No       Difference of the day received by how       No         Constances       Constrol of Fail       No       Difference of the day received by how       No       Difference of the day received by down       No         Constances       Constances       Constances       Difference       Differenc	Project Location:	EDDY COUN	ITY, NM	Due Date:		Τ							Cool: Cool	MeOH: Me
PLE RECENT     Topol Blane:     Voit Normaler ID:     Prime     Display       Received Intert     Vex     No     Thermometer ID:     Prime     Prime       Custody Seats:     Vex     No     Thermometer ID:     Prime     Prime       Custody Seats:     Vex     No     No     No     Prime     Prime       Custody Seats:     Vex     No     No     Prime     Prime     Prime       Contracted Temperature     A     Sampled     Sampled     Prime     Prime     Prime       Sample Identification     Matrix     Data     Sampled     Sampled     Prime     Prime       Sample Identification     Sample Identification     Matrix     Data     Sample Identification     Prime       FSO1     S     7119/2022     D/0.5     1     COMP     1     X     X       FSO1     S     7119/2022     D/0.5     1     Sample Identification     Prime       FSO1     S     7119/2022     D/0.5     1     Sample Identification     Prime       FSO1     S     7119/2022     D/0.5     1     No     No     Sample Identification       FSO1     S     7119/2022     D/0.5     1     No     No     Sample Identification	Sampler's Name:	Conner SI	hore	TAT starts the the lab, if rec	te day receiv ceived by 4:5					International Content on Content on Content			HUL: HU H2S04: H2	NaOH: Na NaOH: Na
	SAMPI F RECE	-		Wet Ice:	18	Т							H3PO4: HP	
	Samples Received In	+		ar ID:	3	B							NaHSO4: N	IABIS
	Cooler Custody Sea	Yes No/		actor:	· O.	d d							Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : N	laSO <sub>3</sub>
	Sample Custody Se:	Yes Nd	A Temperatur	e Reading:	m	0	3) Si			osu-2596 Chain	of Custody		Zn Acetate	+NaOH: Zn
	Total Containers:		Corrected T	emperature:	2	J	side I	-		-	-		NaUH+Aso	orbic Acia: SAPC
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	FSC		7/19/2022			1 1	×	$\vdash$	Ĵ				Cost Ce	inter: 156887100
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(eur	Value mound of this Notice: Signature of this of service. Eurofins Xen	document and relinquishmic co will be liable only for the	ent of samples cor cost of samples a be applied to each	Istitutes a valid nd shalt not assi	purchase orde ume any rosp harge of \$5 fo	ar from clien onsibility for r each samp	company any losse e submitt	to Eurofins t or expension	Xenco, its al ss incurred b is Xenco, bu	filiates and subcontractors y the client if such losses , i not analyzed. These term	<ul> <li>It assigns standard te are due to circumstance: s will be enforced unless</li> </ul>	rms and condition: s beyond the contro previously negoti	a alect.	
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Job Number: 890-2596-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2596 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	
s the Field Sampler's name present on COC?	True	
here 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	
ample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	

N/A

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

Job Number: 890-2596-1 SDG Number: 03E1558056

List Source: Eurofins Midland

List Creation: 07/21/22 10:51 AM

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2596 List Number: 2 Creator: Rodriguez, Leticia

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

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

Received by OCD: 8/19/2022 11:50:23 AM

LINKS

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## Environment Testing America

## **ANALYTICAL REPORT**

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

## Laboratory Job ID: 890-2598-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

## For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/27/2022 8:18:45 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

SDG: 03E1558056

Laboratory Job ID: 890-2598-1

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EDL

LOD

LOQ MCL

MDA MDC

MDL

MQL NC

ND

NEG

POS

PQL PRES

QC

RER

RL RPD

TEF

TEQ

TNTC

ML MPN

Client: Ensolu	m	Job ID: 890-2598-1	
-	EU 5E HAN SOLO 105H	SDG: 03E1558056	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		_
F2	MS/MSD RPD exceeds control limits		5
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			6
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		8
U	Indicates the analyte was analyzed for but not detected.		
Glossary			9
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		1
Dil Fac	Dilution Factor		1
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)		

Eurofins Carlsbad

Estimated Detection Limit (Dioxin)

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

Minimum Detectable Concentration (Radiochemistry)

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

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

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Project/Site: BEU 5E HAN SOLO 105H

4

5

#### Job ID: 890-2598-1 SDG: 03E1558056

#### Job ID: 890-2598-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2598-1

#### Receipt

The samples were received on 7/19/2022 3:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30296 and analytical batch 880-30501 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

#### GC Semi VOA

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.

Project/Site: BEU 5E HAN SOLO 105H

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

RL

0.00200

0.00200

0.00200

Unit

mg/Kg

mg/Kg

mg/Kg

D

Prepared

07/21/22 15:56

07/21/22 15:56

07/21/22 15:56

Job ID: 890-2598-1 SDG: 03E1558056

## **Client Sample ID: PH01**

Date Collected: 07/19/22 09:15 Date Received: 07/19/22 15:58

Sample Depth: 1

Analyte

Benzene

Toluene

Ethylbenzene

Client: Ensolum

## Lab Sample ID: 890-2598-

Analyzed

07/26/22 08:44

07/26/22 08:44

07/26/22 08:44

Matrix: Soli

00000	
598-1 Solid	3
	4
	5
Dil Fac 1	6
1	
1	7
1	8
1	
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	14

		-					••••=••==••••••	
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/21/22 15:56	07/26/22 08:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 15:56	07/26/22 08:44	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/21/22 15:56	07/26/22 08:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130			07/21/22 15:56	07/26/22 08:44	1
1,4-Difluorobenzene (Surr)	100		70 - 130			07/21/22 15:56	07/26/22 08:44	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			07/26/22 11:03	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	e 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		07/25/22 16:23	07/26/22 14:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 14:27	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 14:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130			07/25/22 16:23	07/26/22 14:27	1
o-Terphenyl	122		70 - 130			07/25/22 16:23	07/26/22 14:27	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27.2		5.00	mg/Kg			07/25/22 01:05	1
lient Sample ID: PH01A						Lab Sar	nple ID: 890-2	2598-2
ate Collected: 07/19/22 09:20							Matri	ix: Solid
ate Received: 07/19/22 15:58								
ample Depth: 2	Compounds (	GC)						
bate Received: 07/19/22 15:58 Sample Depth: 2 - Method: 8021B - Volatile Organic Analyte		GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
ample Depth: 2 Method: 8021B - Volatile Organic			<b>RL</b> 0.00199	Unit mg/Kg	<u>D</u>	Prepared 07/21/22 15:56	Analyzed 07/26/22 09:05	Dil Fac

4	4-Bromofluorobenzene (Surr)	98		70 - 130		07/21/22 15:56	07/26/22 09:05	1
9	Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
>	Kylenes, Total	<0.00398	U	0.00398	mg/Kg	07/21/22 15:56	07/26/22 09:05	1
C	o-Xylene	<0.00199	U	0.00199	mg/Kg	07/21/22 15:56	07/26/22 09:05	1
r	m-Xylene & p-Xylene	< 0.00398	U	0.00398	mg/Kg	07/21/22 15:56	07/26/22 09:05	1
E	Ethylbenzene	<0.00199	U	0.00199	mg/Kg	07/21/22 15:56	07/26/22 09:05	1
٦	Toluene	<0.00199	U	0.00199	mg/Kg	07/21/22 15:56	07/26/22 09:05	1
					0 0			

4-Bromofluorobenzene (Surr)

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## **Client Sample Results**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

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

Date Collected: 07/19/22 09:20 Date Received: 07/19/22 15:58

Sample Depth: 2

o-Terphenyl

#### Job ID: 890-2598-1 SDG: 03E1558056

## Lab Sample ID: 890-2598-2

5

Matrix:	Solid
	Soliu

Dil Fac

Dil Fac

Dil Fac

Dil Fac

Dil Fac

07/26/22 14:49

07/25/22 16:23

1

1

1

1

1

1

1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed
1,4-Difluorobenzene (Surr)	105		70 - 130			07/21/22 15:56	07/26/22 09:05
Method: Total BTEX - Total BTEX	Colculation						
	Result	Qualifier	RL	Unit	D	Drenered	Analyzed
Analyte						Prepared	Analyzed
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/26/22 11:03
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed
Total TPH	83.6		50.0	mg/Kg			07/27/22 08:23
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 14:49
(GRO)-C6-C10							
Diesel Range Organics (Over	83.6		50.0	mg/Kg		07/25/22 16:23	07/26/22 14:49
C10-C28)							
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 14:49
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed
1-Chlorooctane	103		70 - 130			07/25/22 16:23	07/26/22 14:49

Method: 300.0 - Anions, Ion Chron	natography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	148		4.98	mg/Kg			07/25/22 01:13	1

70 - 130

Project/Site: BEU 5E HAN SOLO 105H

#### Job ID: 890-2598-1 SDG: 03E1558056

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

#### Matrix: Solid

Client: Ensolum

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
'068-A-41-F MS	Matrix Spike	104	96	
7068-A-41-G MSD	Matrix Spike Duplicate	102	94	
2598-1	PH01	89	100	
-2598-2	PH01A	98	105	
880-30296/1-A	Lab Control Sample	98	100	
D 880-30296/2-A	Lab Control Sample Dup	99	128	
80-30296/5-A	Method Blank	94	98	
880-30518/5-A	Method Blank	96	101	
rrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17280-A-18-D MS	Matrix Spike	88	94
880-17280-A-18-E MSD	Matrix Spike Duplicate	85	92
890-2598-1	PH01	114	122
890-2598-2	PH01A	103	115
LCS 880-30622/2-A	Lab Control Sample	102	114
LCSD 880-30622/3-A	Lab Control Sample Dup	91	104
MB 880-30622/1-A	Method Blank	98	110

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

\_\_\_\_\_

Prep Type: Total/NA

Prep Type: Total/NA

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Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: MB 880-30296/5-A

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

Matrix: Solid Analysis Batch: 30501							Prep Type: 1 Prep Batch	
	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/21/22 15:56	07/26/22 00:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/21/22 15:56	07/26/22 00:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/21/22 15:56	07/26/22 00:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/21/22 15:56	07/26/22 00:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/21/22 15:56	07/26/22 00:59	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/21/22 15:56	07/26/22 00:59	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			07/21/22 15:56	07/26/22 00:59	1
1,4-Difluorobenzene (Surr)	98		70 - 130			07/21/22 15:56	07/26/22 00:59	1

#### Lab Sample ID: LCS 880-30296/1-A Matrix: Solid

#### Analysis Batch: 30501

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08741		mg/Kg		87	70 - 130	
Toluene	0.100	0.09930		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.08723		mg/Kg		87	70 - 130	
m-Xylene & p-Xylene	0.200	0.1773		mg/Kg		89	70 - 130	
o-Xylene	0.100	0.1036		mg/Kg		104	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

#### Lab Sample ID: LCSD 880-30296/2-A

#### Matrix: Solid

Analysis Batch: 30501							Prep	Batch:	30296
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08421		mg/Kg		84	70 - 130	4	35
Toluene	0.100	0.08424		mg/Kg		84	70 - 130	16	35
Ethylbenzene	0.100	0.07183		mg/Kg		72	70 - 130	19	35
m-Xylene & p-Xylene	0.200	0.1416		mg/Kg		71	70 - 130	22	35
o-Xylene	0.100	0.09129		mg/Kg		91	70 - 130	13	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	128		70 - 130

#### Lab Sample ID: 880-17068-A-41-F MS Matrix: Solid

#### Analysis Potoby 20504

Analysis Batch: 30501									Prep	Batch: 30296
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1 F2	0.0998	0.05472	F1	mg/Kg		55	70 - 130	
Toluene	<0.00200	U F1	0.0998	0.06737	F1	mg/Kg		68	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 30296

MS MS

0.06057 F1

0.1246 F1

0.07585

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

D

**Client Sa** 

Spike

Added

0.0998

0.200

0.0998

Limits

70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 880-17068-A-41-F MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 30501

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Sample Sample

<0.00200

< 0.00399

%Recovery

<0.00200 UF1

104

96

MS MS

**Result Qualifier** 

U F1

U F1

Qualifier

		ype: To Batch:		4
%Rec	Limits			
60	70 - 130			
62	70 - 130			
76	70 - 130			7
				8
				9
ıple ID	Prep	ike Dup ype: To Batch:	tal/NA 30296	9 1
	Prep T Prep %Rec	ype: To	tal/NA 30296 RPD	8 9 1 1
%Rec	Prep T Prep %Rec Limits	ype: To Batch: RPD	tal/NA 30296 RPD Limit	8 9 1 1
% <b>Rec</b> 37	Prep T Prep %Rec Limits 70 - 130	ype: To Batch: RPD 37	tal/NA 30296 RPD Limit 35	8 9 1 1
% <b>Rec</b> 37 48	Prep T Prep %Rec Limits 70 - 130 70 - 130	<b>RPD</b> 37	tal/NA 30296 RPD Limit 35 35	8 9 1 1 1
%Rec 37 48 43	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	ype: To Batch: <u>RPD</u> <u>37</u> 32 33	tal/NA 30296 RPD Limit 35 35 35	8 9 1 1 1
% <b>Rec</b> 37 48	Prep T Prep %Rec Limits 70 - 130 70 - 130	<b>RPD</b> 37	tal/NA 30296 RPD Limit 35 35	8 9 1 1 1

#### Lab Sample ID: 880-17068-A-41-G MSD Matrix: Solid

#### Analysis Batch: 30501 Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier Analyte Unit D 0.100 0.03749 F1 F2 Benzene <0.00200 U F1 F2 mg/Kg Toluene 0.100 0.04858 F1 <0.00200 UF1 mg/Kg Ethylbenzene <0.00200 UF1 0.100 0.04345 F1 mg/Kg m-Xylene & p-Xylene <0.00399 UF1 0.201 0.08941 F1 mg/Kg 0.100 <0.00200 UF1 0.05549 F1 o-Xylene mg/Kg

	MSD	WSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

#### Lab Sample ID: MB 880-30518/5-A Matrix: Solid Analysis Batch: 30501

#### **Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 30518

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			07/25/22 09:31	07/25/22 11:27	1
1,4-Difluorobenzene (Surr)	101		70 - 130			07/25/22 09:31	07/25/22 11:27	1

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

Lab Sample ID: MB 880-30622/1-A Matrix: Solid Analysis Batch: 30645	мв	мв				Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Fotal/NA
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 09:44	1
(GRO)-C6-C10								

**Eurofins Carlsbad** 

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

#### Method: 8015B NM -

Lab Sample ID: MB 880-30622/1- Matrix: Solid	A									Client S	ample ID: Me Prep Typ	be: To	tal/NA
Analysis Batch: 30645											Prep B	atch:	30622
		MB	MB										
Analyte	Re	sult	Qualifier	RL		Uni	t	D	Pi	repared	Analyzed		Dil Fac
Diesel Range Organics (Over C10-C28)	<	50.0	U	50.0		mg/	Кg		07/2	5/22 16:23	07/26/22 09:	44	1
Oll Range Organics (Over C28-C36)	<	50.0	U	50.0		mg/	Кg		07/2	5/22 16:23	07/26/22 09:	44	1
		MВ	МВ										
Surrogate	%Reco	very	Qualifier	Limits					PI	repared	Analyzed		Dil Fac
1-Chlorooctane		98		70 - 130					07/2	5/22 16:23	07/26/22 09	44	1
p-Terphenyl		110		70 - 130					07/2	5/22 16:23	07/26/22 09	44	1
Lab Sample ID: LCS 880-30622/2	2-A							C	lient	Sample	ID: Lab Con		
Matrix: Solid											Prep Ty	be: To	tal/NA
Analysis Batch: 30645											Prep B	atch:	30622
				Spike	LCS	LCS					%Rec		
Analyte				Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics				1000	957.4		mg/Kg			96	70 - 130		
GRO)-C6-C10													
Diesel Range Organics (Over				1000	926.5		mg/Kg			93	70 - 130		
C10-C28)													
	LCS	LCS											
Surrogate	%Recovery	Qual	ifier	Limits									
1-Chlorooctane	102			70 - 130									
p-Terphenyl	114			70 _ 130									
Lab Sample ID: LCSD 880-30622	/ <b>3-A</b>						C	ient	Sam	nle ID: I	ab Control S	Sampl	e Dun
Matrix: Solid											Prep Ty		
Analysis Batch: 30645											Prep B		
Analysis Batch. 00040				Spike	LCSD	LCSD					%Rec	aton.	RPD
Analyte				Added		Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Gasoline Range Organics				1000	988.4	quamor	mg/Kg			99	70 - 130	3	20
(GRO)-C6-C10				1000	000.1		ing/itg			00	10 - 100	Ŭ	20
Diesel Range Organics (Over				1000	863.8		mg/Kg			86	70 - 130	7	20
C10-C28)							2 0						
	LCSD	LCSI	D										
Surrogate	%Recovery	Qual	ifier	Limits									
1-Chlorooctane	91			70 - 130									
o-Terphenyl	104			70 - 130									

#### Lab Sample ID: 880-17280-A-18-D MS Matrix: Solid

Analysis Batch: 30645									Pre	p Batch: 30622
	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	1163		mg/Kg		116	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	789.8		mg/Kg		79	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	94		70 - 130

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**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Job ID: 890-2598-1

SDG: 03E1558056

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2598-1 SDG: 03E1558056

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

Matrix: Solid									Prep 1	Гуре: То	tal/N/
Analysis Batch: 30645										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPI
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Gasoline Range Organics	<50.0	U	999	1054		mg/Kg		106	70 - 130	10	2
(GRO)-C6-C10						0 0					
Diesel Range Organics (Over C10-C28)	<50.0	U	999	773.5		mg/Kg		77	70 - 130	2	2
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane	85		70 - 130								
o-Terphenyl	92		70 - 130								
lethod: 300.0 - Anions, Ion Lab Sample ID: MB 880-30245/1 Matrix: Solid Analysis Batch: 30486		ography						Client S	Sample ID: Prep	Method Type: S	
		МВ МВ									
Analyte	R	esult Qualifier		RL	Unit	1	D P	repared	Analyz	zed	Dil Fa
Chloride	<	5.00 U		5.00	mg/K	 g			07/24/22		
Matrix: Solid	2-A						Client	Sample	e ID: Lab Co Prep	ontrol S Type: S	
Matrix: Solid Analysis Batch: 30486	2- <b>A</b>		Spike Added		LCS Qualifier	Unit	Client	%Rec			
Matrix: Solid Analysis Batch: 30486 <sup>Analyte</sup>	2- <b>A</b>		-			Unit mg/Kg		-	Prep %Rec		
Matrix: Solid Analysis Batch: 30486 Analyte Chloride			Added	Result		mg/Kg	D	% <b>Rec</b> 106	Prep %Rec Limits 90 - 110	Type: S	olub
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30245			Added	Result		mg/Kg	D	% <b>Rec</b> 106	Prep %Rec Limits 90 - 110	Type: S	le Du
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid			Added	Result		mg/Kg	D	% <b>Rec</b> 106	Prep %Rec Limits 90 - 110	Type: S	le Du
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid			Added250	Result 264.1	Qualifier	mg/Kg	D	% <b>Rec</b> 106	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: S	le Du
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486			Added 250 Spike	Result 264.1 LCSD	Qualifier	mg/Kg Clie	D	%Rec 106 aple ID:	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: S  ol Sampl Type: S	le Du olub RF
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clie Unit	D	%Rec 106 pple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	Type: S	le Du olub RF Lin
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte			Added 250 Spike	Result 264.1 LCSD	Qualifier	mg/Kg Clie	D	%Rec 106 aple ID:	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: S  ol Sampl Type: S	le Du olub RF Lim
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte Chloride			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clie Unit	D	%Rec           106           ople ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110	Type: S DI Sampl Type: S <u>RPD</u> 1	le Du olub RF Lim
Lab Sample ID: LCS 880-30245/2 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clie Unit	D	%Rec           106           ople ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam	Type: S ol Sampl Type: S <u>1</u> ple ID: F	le Du solub RF Lin 2 PH01
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid			Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clie Unit	D	%Rec           106           ople ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam	Type: S DI Sampl Type: S <u>RPD</u> 1	le Du solub RF Lin 2 PH01
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte Chloride	5/3-A		Added 250 Spike Added	Result 264.1 LCSD Result 265.5	Qualifier	mg/Kg Clie Unit	D	%Rec           106           ople ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam	Type: S ol Sampl Type: S <u>1</u> ple ID: F	le Du solubi RP Lim 2 PH01.
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid Analysis Batch: 30486	5/3-A Sample	Sample Qualifier	Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier MS	mg/Kg Clie Unit	D	%Rec           106           mple ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam Prep	Type: S ol Sampl Type: S <u>1</u> ple ID: F	le Du colub RP Lim 2 PH01
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid Analysis Batch: 30486 Analyte	5/3-A Sample	-	Added 250 Spike Added 250 Spike	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier	mg/Kg Clie Unit mg/Kg	D	%Rec           106           ople ID:           %Rec           106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam Prep %Rec	Type: S ol Sampl Type: S <u>1</u> ple ID: F	le Du solub RF Lin 2 PH01
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid Analysis Batch: 30486 Analyte Chloride	5/3-A Sample Result 148	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	D	%Rec           106           %Rec           106           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam Prep %Rec Limits 90 - 110	Type: S DI Sampl Type: S RPD 1 ple ID: F Type: S	le Du olub RF Lim 29H01 solub
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid Analysis Batch: 30486 Analysis Batch: 30486 Analysis Batch: 30486 Analyte Chloride	5/3-A Sample Result 148	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	D	%Rec           106           %Rec           106           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam 90 - 110 Client Sam	Type: S DI Sampl Type: S <u> RPD 1 </u> ple ID: F Type: S ple ID: F	le Du olub RF Lim 29H01 29H01
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid Analysis Batch: 30486 Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-2 MSD Matrix: Solid	5/3-A Sample Result 148	-	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	D	%Rec           106           %Rec           106           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam 90 - 110 Client Sam	Type: S DI Sampl Type: S RPD 1 ple ID: F Type: S	le Du olub RF Lin 2PH01 20lub
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid Analysis Batch: 30486 Analyte Chloride	5/3-A Sample Result 148	Qualifier	Added 250 Spike Added 250 Spike Added 249	Result 264.1 LCSD Result 265.5 MS Result 410.1	Qualifier LCSD Qualifier MS Qualifier	mg/Kg Clie Unit mg/Kg	D	%Rec           106           %Rec           106           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam Prep %Rec Limits 90 - 110	Type: S DI Sampl Type: S <u> RPD 1 </u> ple ID: F Type: S ple ID: F	le Du colub RF Lim 2 PH01 colub
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-30245 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-2 MS Matrix: Solid Analysis Batch: 30486 Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-2 MSD Matrix: Solid	5/3-A Sample Result 148 Sample	Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 410.1	Qualifier LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	D	%Rec           106           %Rec           106           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sam 90 - 110 Client Sam	Type: S DI Sampl Type: S <u> RPD 1 </u> ple ID: F Type: S ple ID: F	le Du olubi RP Lim 2 PH01. solubi

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## **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2598-1 SDG: 03E1558056

## **GC VOA**

#### Prep Batch: 30296

rep Batch: 30296					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2598-1	PH01	Total/NA	Solid	5035	
890-2598-2	PH01A	Total/NA	Solid	5035	
MB 880-30296/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30296/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30296/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17068-A-41-F MS	Matrix Spike	Total/NA	Solid	5035	
880-17068-A-41-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2598-1	PH01	Total/NA	Solid	8021B	30296
890-2598-1 890-2598-2	PH01 PH01A	Total/NA Total/NA	Solid Solid	8021B 8021B	
890-2598-1 890-2598-2 MB 880-30296/5-A	PH01 PH01A Method Blank	Total/NA Total/NA Total/NA	Solid Solid Solid	8021B 8021B 8021B	30296 30296 30296 30296
890-2598-1 890-2598-2	PH01 PH01A	Total/NA Total/NA Total/NA Total/NA	Solid Solid	8021B 8021B	
890-2598-1 890-2598-2 MB 880-30296/5-A	PH01 PH01A Method Blank	Total/NA Total/NA Total/NA	Solid Solid Solid	8021B 8021B 8021B	30296 30296 30296 30296
890-2598-1 890-2598-2 MB 880-30296/5-A MB 880-30518/5-A	PH01 PH01A Method Blank Method Blank	Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid	8021B 8021B 8021B 8021B 8021B	30296 30296 30296 30296 30518
890-2598-1 890-2598-2 MB 880-30296/5-A MB 880-30518/5-A LCS 880-30296/1-A	PH01 PH01A Method Blank Method Blank Lab Control Sample	Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid Solid	8021B 8021B 8021B 8021B 8021B 8021B	30296 30296 30296 30518 30296
890-2598-1 890-2598-2 MB 880-30296/5-A MB 880-30518/5-A LCS 880-30296/1-A LCSD 880-30296/2-A	PH01 PH01A Method Blank Method Blank Lab Control Sample Lab Control Sample Dup	Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid Solid Solid	8021B 8021B 8021B 8021B 8021B 8021B 8021B	30296 30296 30296 30518 30296 30296 30296
890-2598-1 890-2598-2 MB 880-30296/5-A MB 880-30518/5-A LCS 880-30296/1-A LCSD 880-30296/1-A 880-17068-A-41-F MS	PH01 PH01A Method Blank Method Blank Lab Control Sample Lab Control Sample Dup Matrix Spike	Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid Solid Solid Solid	8021B 8021B 8021B 8021B 8021B 8021B 8021B 8021B	30296 30296 30296 30518 30296 30296 30296
890-2598-1 890-2598-2 MB 880-30296/5-A MB 880-30518/5-A LCS 880-30296/1-A LCSD 880-30296/2-A 880-17068-A-41-F MS 880-17068-A-41-G MSD	PH01 PH01A Method Blank Method Blank Lab Control Sample Lab Control Sample Dup Matrix Spike	Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid Solid Solid Solid	8021B 8021B 8021B 8021B 8021B 8021B 8021B 8021B	30296 30296 30296 30518 30296 30296 30296

#### Analysis Batch: 30676

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2598-1	PH01	Total/NA	Solid	Total BTEX	
890-2598-2	PH01A	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Prep Batch: 30622

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2598-1	PH01	Total/NA	Solid	8015NM Prep	
890-2598-2	PH01A	Total/NA	Solid	8015NM Prep	
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2598-1	PH01	Total/NA	Solid	8015B NM	30622
890-2598-2	PH01A	Total/NA	Solid	8015B NM	30622
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015B NM	30622
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30622
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30622
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30622
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30622

#### Received by OCD: 8/19/2022 11:50:23 AM

**QC Association Summary** 

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

#### GC Semi VOA

#### Analysis Batch: 30755

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2598-1	PH01	Total/NA	Solid	8015 NM	
890-2598-2	PH01A	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 30245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2598-1	PH01	Soluble	Solid	DI Leach	8
890-2598-2	PH01A	Soluble	Solid	DI Leach	C
MB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach	0
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	3
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2598-2 MS	PH01A	Soluble	Solid	DI Leach	
890-2598-2 MSD	PH01A	Soluble	Solid	DI Leach	

#### Analysis Batch: 30486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2598-1	PH01	Soluble	Solid	300.0	30245
890-2598-2	PH01A	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
890-2598-2 MS	PH01A	Soluble	Solid	300.0	30245
890-2598-2 MSD	PH01A	Soluble	Solid	300.0	30245

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Job ID: 890-2598-1 SDG: 03E1558056 Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2598-1 SDG: 03E1558056

## Lab Sample ID: 890-2598-1

Lab Sample ID: 890-2598-2

Matrix: Solid

Date Collected: 07/19/22 09:15 Date Received: 07/19/22 15:58

**Client Sample ID: PH01** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30296	07/21/22 15:56	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/26/22 08:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30676	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30755	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 14:27	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 01:05	СН	XEN MID

#### **Client Sample ID: PH01A** Date Collected: 07/19/22 09:20

#### Date Received: 07/19/22 15:58

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	30296	07/21/22 15:56	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/26/22 09:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30676	07/26/22 11:03	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30755	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 14:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 01:13	СН	XEN MID

#### Laboratory References:

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

Matrix: Solid

Eurofins Carlsbad

## Accreditation/Certification Summary

		Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: BEU 5E H	AN SOLO 105H			Job ID: 890-2598-1 SDG: 03E1558056	2
Laboratory: Eurofi Unless otherwise noted, all an		y were covered under each acci	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas The following analytes a	are included in this repor	NELAP t, but the laboratory is not certifi	T104704400-22-24 ied by the governing authority. This list ma	06-30-23 ay include analytes for which	5
the agency does not off Analysis Method	er certification. Prep Method	Matrix	Analyte		
8015 NM Total BTEX		Solid Solid	Total TPH Total BTEX		
					8
					9
					10
					13

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.

Project/Site: BEU 5E HAN SOLO 105H

#### Job ID: 890-2598-1 SDG: 03E1558056

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:

Client: Ensolum

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Eurofins Carlsbad

#### Job ID: 890-2598-1 SDG: 03E1558056

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-2598-1	PH01	Solid	07/19/22 09:15	07/19/22 15:58	1	4
890-2598-2	PH01A	Solid	07/19/22 09:20	07/19/22 15:58	2	
						5
						8
						9
						12
						13

.

Chain of Custody

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

Work Order No:

Project Manager:	Ben Belitl		Bill to: (if different)		Garrett Green	Ŀ		Work C	Work Order Comments	
Company Name:	Ensolum, LLC		Company Name:		XTO Energy, Inc.	Inc.	-	Program: UST/PST 🗌 PRP 🗍 Brownfields 🗍 RRC		Superfund
Address:	3122 National parks Hwy		Address:		3104 E. Gree	Green Street		State of Project:		l
City, State ZIP:	Carlsbad, NM 88220		City, State ZIP:	Cai	Carlsbad, NM 88220	A 88220		Reporting: Level II 🗍 Level III 🗍 PST/UST 🗍 TRRP 🗍		
Phone:	9898540852	Email:	Email: bbelil@ensolum.	m.com				Deliverables: EDD	ADaPT  Other:	
Project Name:	BEU 5E HAN SOLO 105H	Turn	Turn Around				ANALYSIS REQUEST	JEST	Preservative Codes	Codes
Project Number:	03E1558056	Z Routine	🗆 Rush	Pres. Code		_			None: NO D	DI Water: H <sub>2</sub> O
Project Location:	EDDY COUNTY, NM	Due Date:							-	MeOH: Me
Sampler's Name: PO #:	Conner Shore	TAT starts the the the the the the the tab.	TAT starts the day received by the lab, if received by 4:30pm	81					HCL: HC H2 H2S04: H2 N	NaOH: Na
SAMPLE RECEIPT	EIPT Temp Blank: (res) No	Wet Ice:	Yes No	eten (0.					H <sub>3</sub> PO4: HP	
Samples Received Intact:	$\succeq$	ter ID:	Thm-00-						NaHSO4: NABIS	
Cooler Custody Seals:	als: Yes No /N/A Correction Factor	Factor:	C.0-						Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	
Sample Custody Seals:	Yes No NIA	Temperature Reading:	C.N	3/ SE		Li	890-2598 Chain of Custody	of Custody	Zn Acetate+NaOH: Zn	Zn A: cADC
Total Containers:	Corrected	Corrected Temperature:	2.8			208)		-		2 LLC . n
Sample Id	Sample Identification Matrix Sampled	Time Sampled	Depth Grab/ Comp	CHFOL Cont Cont Cat	8) H9T	хэта			Sample Comments	ments
ι ά	PH01 S 7/19/2022	915	1' Grab/	+ ×	×	×			Cast Center: 1568871001	68871001
H		086	2' Grab/	1 X	X	×				
		V				+				
		$\overline{\left\langle \right\rangle}$	_	-	-	_				
					-					
									Incident ID:NAPP2209731445	220973144
In J										
				-	_	_				
Total 200.7 / 6010	6010 200.8 / 6020:	8RCRA 13PI	13PPM Texas 11	Al Sb	Sb As Ba E	Be B Cd	Cd Ca Cr Co Cu Fe Pb M	J Mn Mo Ni K Se A	a Sr Ti Sn U V	Zn
<b>Sircle Method(s)</b>	Circle Method(s) and Metal(s) to be analyzed	TCLP / S	TCLP / SPLP 6010: 8R(	<b>BRCRA</b> Sb	Sb As Ba Be	Be Cd	Cd Cr Co Cu Pb Mn Mo Ni	i Se Ag TI U Hg:	Hg: 1631 / 245 1 / 7470 / 747	71
lotice: Signature of th f service. Eurofins X f Eurofins Xenco. A r	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 contro of Eurofins Xenco. A minimum charge of \$5.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotia	onstitutes a valid pr and shall not assu ch project and a ch	urchase order from me any responsibilit arge of \$5 for each a	client comp. y for any lot tample subr	iny to Euro ses or exp litted to Eu	fins Xenco. Inses incur rofins Xenc	its affiliates and subcontractors. It i red by the client if such losses are d o, but not analyzed. These terms wil	der from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions ponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	ons ntroi otlatad.	
Relinquished	Relinquished by: (Signature) Receiv	Received by: (Signature)	ture)	Dê	Date/Time	-	Relinquished by: (Signature)	re) Received by: (Signature)		Date/Time
3	X	ella 2	2 that	16115	3	1535				
			0			4				

14

Job Number: 890-2598-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2598 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	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	

N/A

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

### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2598 List Number: 2 Creator: Rodriguez, Leticia

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

Job Number: 890-2598-1 SDG Number: 03E1558056

List Source: Eurofins Midland List Creation: 07/21/22 10:51 AM

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Eurofins Carlsbad Released to Imaging: 11/23/2022 1:52:32 PM Received by OCD: 8/19/2022 11:50:23 AM

# eurofins 🔅

## **Environment Testing** America

## **ANALYTICAL REPORT**

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

## Laboratory Job ID: 890-2599-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

## For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/27/2022 8:19:04 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com



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

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

SDG: 03E1558056

Laboratory Job ID: 890-2599-1

## **Table of Contents**

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LOD

LOQ MCL

MDA

MDC

MDL

ML MPN

MQL NC

ND

NEG

POS

PQL PRES

QC

RER RL

RPD

TEF

TEQ

TNTC

Job ID: 890-2599-1	
SDG: 03E1558056	
	3
	5
	9
	C
	C
	4
	13

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

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

Project/Site: BEU 5E HAN SOLO 105H

4

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#### Job ID: 890-2599-1 SDG: 03E1558056

#### Job ID: 890-2599-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2599-1

#### Receipt

The samples were received on 7/19/2022 3:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-30503 and analytical batch 880-30499 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30518 and analytical batch 880-30501 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

#### GC Semi VOA

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.
Project/Site: BEU 5E HAN SOLO 105H

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

<0.00200 U

<0.00399 U

<0.00200 U

<0.00399 U

RL

0.00200

0.00200

0.00200

0.00399

0.00200

0.00399

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

07/25/22 08:40

07/25/22 08:40

07/25/22 08:40

07/25/22 08:40

07/25/22 08:40

07/25/22 08:40

Job ID: 890-2599-1 SDG: 03E1558056

# **Client Sample ID: PH02**

Date Collected: 07/19/22 08:55 Date Received: 07/19/22 15:58

Sample Depth: 1

Client: Ensolum

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

# Lab Sample ID: 890-2599-1

Analyzed

07/25/22 15:14

07/25/22 15:14

07/25/22 15:14

07/25/22 15:14

07/25/22 15:14

07/25/22 15:14

Matrix: Solid

Dil Fac

1

1

1

1

1

1

Ļ	5
8	3
	•
	3

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			07/25/22 08:40	07/25/22 15:14	1
1,4-Difluorobenzene (Surr)	82		70 - 130			07/25/22 08:40	07/25/22 15:14	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			07/25/22 15:51	1
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	55.4		49.9	mg/Kg			07/27/22 08:23	1
- 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	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 16:27	1
Diesel Range Organics (Over C10-C28)	55.4		49.9	mg/Kg		07/25/22 16:23	07/26/22 16:27	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 16:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130			07/25/22 16:23	07/26/22 16:27	1
o-Terphenyl	107		70 - 130			07/25/22 16:23	07/26/22 16:27	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	173		5.03	mg/Kg			07/25/22 01:37	1
Client Sample ID: PH02A						Lab Sar	nple ID: 890-	2599-2
Date Collected: 07/19/22 09:00							Matri	ix: Solid
Date Received: 07/19/22 15:58								
Sample Depth: 2								
– Method: 8021B - Volatile Organic	Compounds	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		07/25/22 09:31	07/25/22 12:58	1
Toluene	<0.00198	U	0.00198	mg/Kg		07/25/22 09:31	07/25/22 12:58	1
Ethylbonzono	~0.00109		0.00108	ma/Ka		07/25/22 00:31	07/25/22 12.58	1

4-Bromofluorobenzene (Surr)	101		70 - 130		07/25/22 09:31	07/25/22 12:58	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00397	U	0.00397	mg/Kg	07/25/22 09:31	07/25/22 12:58	1
o-Xylene	<0.00198	U	0.00198	mg/Kg	07/25/22 09:31	07/25/22 12:58	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg	07/25/22 09:31	07/25/22 12:58	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg	07/25/22 09:31	07/25/22 12:58	1
Toluene	<0.00198	U	0.00198	mg/Kg	07/25/22 09:31	07/25/22 12:58	1

Eurofins Carlsbad

# **Client Sample Results**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

## **Client Sample ID: PH02A**

Date Collected: 07/19/22 09:00 Date Received: 07/19/22 15:58

Sample Depth: 2

Job ID: 890-2599-1 SDG: 03E1558056

# Lab Sample ID: 890-2599-2

Analyzed

07/25/22 12:58

Analyzed

07/25/22 15:51

Prepared

07/25/22 09:31

Prepared

Matrix: Solid

Dil Fac

Dil Fac

Dil Fac 1

1

1

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8

Method: 8021B - Volatile Organic C	ompounds (	GC) (Contii	nued)		
Surrogate	%Recovery	Qualifier	Limits		
1,4-Difluorobenzene (Surr)	95		70 - 130		
Method: Total BTEX - Total BTEX C	alculation				
Analyte	Result	Qualifier	RL	Unit	D
Total BTEX	<0.00397	U	0.00397	mg/Kg	

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed
Total TPH	<50.0 U	50.0	mg/Kg			07/27/22 08:23

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 16:48	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 16:48	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 16:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			07/25/22 16:23	07/26/22 16:48	1
o-Terphenyl	110		70 - 130			07/25/22 16:23	07/26/22 16:48	1
- Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	152		5.05	mg/Kg		. <u> </u>	07/25/22 01:44	1

Eurofins Carlsbad

Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2599-1 SDG: 03E1558056

Prep Type: Total/NA

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

Matrix: Solid

Client: Ensolum

_				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-17291-A-1-D MS	Matrix Spike	96	99		
880-17291-A-1-E MSD	Matrix Spike Duplicate	92	104		
890-2599-1	PH02	95	82		- 22
890-2599-2	PH02A	101	95		
890-2631-A-1-B MS	Matrix Spike	102	86		
890-2631-A-1-C MSD	Matrix Spike Duplicate	118	89		
LCS 880-30503/1-A	Lab Control Sample	107	97		
LCS 880-30518/1-A	Lab Control Sample	97	102		
LCSD 880-30503/2-A	Lab Control Sample Dup	112	95		
LCSD 880-30518/2-A	Lab Control Sample Dup	101	96		
MB 880-30503/5-A	Method Blank	99	86		
MB 880-30518/5-A	Method Blank	96	101		
Surrogate Legend					
BFB = 4-Bromofluorober					
DFBZ = 1,4-Difluoroben:	zene (Surr)				

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

#### Matrix: Solid

-			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17280-A-18-D MS	Matrix Spike	88	94
880-17280-A-18-E MSD	Matrix Spike Duplicate	85	92
890-2599-1	PH02	94	107
890-2599-2	PH02A	99	110
LCS 880-30622/2-A	Lab Control Sample	102	114
LCSD 880-30622/3-A	Lab Control Sample Dup	91	104
MB 880-30622/1-A	Method Blank	98	110

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: MB 880-30503/5-A

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

Matrix: Solid Analysis Batch: 30499							Prep Type: 1 Prep Batch	
	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			07/25/22 08:40	07/25/22 11:49	1
1,4-Difluorobenzene (Surr)	86		70 - 130			07/25/22 08:40	07/25/22 11:49	1

#### Lab Sample ID: L Matrix: Solid

# Analysis Batch:

	Spike	LCS LCS				%Rec	
Analyte	Added	Result Qualifie	er Unit	D	%Rec	Limits	
Benzene	0.100	0.1004	mg/Kg		100	70 - 130	
Toluene	0.100	0.1002	mg/Kg		100	70 - 130	
Ethylbenzene	0.100	0.1038	mg/Kg		104	70 - 130	
m-Xylene & p-Xylene	0.200	0.2077	mg/Kg		104	70 - 130	
o-Xylene	0.100	0.1147	mg/Kg		115	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: L

#### Matrix: Solid

Analysis Batch: 30499							Prep	Batch:	30503
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09092		mg/Kg		91	70 - 130	10	35
Toluene	0.100	0.09262		mg/Kg		93	70 - 130	8	35
Ethylbenzene	0.100	0.09946		mg/Kg		99	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2016		mg/Kg		101	70 - 130	3	35
o-Xylene	0.100	0.1100		mg/Kg		110	70 - 130	4	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

# Lab Sample ID: 8

# Matrix: Solid

Analysis Batch: 30499									Prep	Batch: 30503
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.06688	F1	mg/Kg		67	70 - 130	
Toluene	<0.00201	U	0.100	0.08166		mg/Kg		81	70 - 130	

Eurofins Carlsbad

**Client Sample ID: Method Blank** 

										i icp iypc		
30499										Prep Bat	tch: (	30503
		МВ	MB									
	R	esult	Qualifier	RL		Unit	:	D	Prepared	Analyzed		Dil Fac
	<0.00	0200	U	0.00200	-	mg/ł	Kg	-	07/25/22 08:40	07/25/22 11:49	9	1
	<0.00	0200	U	0.00200		mg/ł	Кg		07/25/22 08:40	07/25/22 11:49	9	1
	<0.00	0200	U	0.00200		mg/ł	Кg		07/25/22 08:40	07/25/22 11:49	9	1
e	<0.00	0400	U	0.00400		mg/ł	Кg		07/25/22 08:40	07/25/22 11:49	9	1
	<0.00	0200	U	0.00200		mg/k			07/25/22 08:40	07/25/22 11:49	9	1
		0400		0.00400		mg/k	-		07/25/22 08:40	07/25/22 11:49	9	1
							C					
	~~~											· _
	%Reco	-	Qualifier	Limits					Prepared	Analyzed		Dil Fac
ne (Surr)		99		70 - 130					07/25/22 08:40	07/25/22 11:49		1
(Surr)		86		70 - 130					07/25/22 08:40	07/25/22 11:49	9	1
1 00 000 005	00/4 A								Ollerst Demails	De Lab Cant		
LCS 880-305	03/1-A							U	Client Sample I			-
										Prep Type		
30499				0.11-	1.00					Prep Bat	tch: a	30503
				Spike		LCS				%Rec		
				Added		Qualifier	Unit		<u>D%Rec</u>	Limits		
				0.100	0.1004		mg/Kg		100	70 - 130		
				0.100	0.1002		mg/Kg		100	70 - 130		
				0.100	0.1038		mg/Kg		104	70 - 130		
)				0.200	0.2077		mg/Kg		104	70 - 130		
				0.100	0.1147		mg/Kg		115	70 - 130		
	105	LCS										
				Limits								
ne (Surr)	_ <b>%Recovery</b> 107	Quan	iner	70 - 130								
	107 97			70 - 130 70 - 130								
(Surr)	31			10 - 130								
LCSD 880-30	)503/2-A						Cľ	ien	t Sample ID: La	ab Control Sr	ampl	e Dup
							-			Prep Type		
30499										Prep Bat		
00400				Spike	LCSD	LCSD				%Rec		RPD
				Added		Qualifier	Unit		D %Rec		RPD	Limit
					0.09092		mg/Kg		_ <u> </u>	70 - 130	10	35
					0.09092		mg/Kg		91	70 - 130 70 - 130	8	35
									93 99	70 - 130 70 - 130	o 4	35 35
					0.09946		mg/Kg					
e				0.200	0.2016		mg/Kg		101	70 - 130	3 ⊿	35
				0.100	0.1100		mg/Kg		110	70 - 130	4	35
	LCSD	LCS	D									
	%Recovery			Limits								
ne (Surr)				70 - 130								
(Surr)	95			70 - 130								
(00)												
890-2631-A-1	1-B MS								Client §	Sample ID: Ma	atrix	Spike
••••										Prep Type		
30499										Prep Bat		
	Sample	Sam	inle	Spike	MS	MS				%Rec		
	Result	-	-	Added		Qualifier	Unit		D %Rec	Limits		
	<0.00201				0.06688		mg/Kg		$-\frac{1}{67}$	70 - 130		
	-0.00201			0.100	0.00000		ing/itg		07	70 - 100		

MS MS

0.08891

0.1766

0.09585

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.100

0.201

0.100

Limits

70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 890-2631-A-1-B MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 30499

Sample Sample

<0.00201

<0.00402 U

<0.00201 U

102

86

%Recovery

Result Qualifier

U

MS MS

Qualifier

Job ID: 890-2599-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Batch: 30503

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

89

88

95

D

# 7

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

07/25/22 11:27

07/25/22 11:27

**Client Sample ID: Lab Control Sample** 

07/25/22 09:31

07/25/22 09:31

Prep Type: Total/NA

Prep Batch: 30518

Matrix: Solid Analysis Batch: 30499

Lab Sample ID: 890-2631-A-1-C MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 30499									Prep	Batch:	30503	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	< 0.00201	U F1	0.0998	0.07027		mg/Kg		70	70 - 130	5	35	
Toluene	<0.00201	U	0.0998	0.07904		mg/Kg		79	70 - 130	3	35	ī
Ethylbenzene	<0.00201	U	0.0998	0.08860		mg/Kg		89	70 - 130	0	35	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1847		mg/Kg		93	70 - 130	5	35	Ē
o-Xylene	<0.00201	U	0.0998	0.1004		mg/Kg		101	70 - 130	5	35	
	MSD	MSD										

	10/50	WSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

#### Lab Sample ID: MB 880-30518/5-A Matrix: Solid Analysis Batch: 30501

	MB	мв						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/25/22 09:31	07/25/22 11:27	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

4-Bromofluorobenzene (Surr)	96	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

#### Lab Sample ID: LCS 880-30518/1-A Matrix: Solid Analysis Batch: 30501

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09704		mg/Kg		97	70 - 130	
Toluene	0.100	0.1029		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.08919		mg/Kg		89	70 - 130	
m-Xylene & p-Xylene	0.200	0.1817		mg/Kg		91	70 - 130	

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Prep Type: Total/NA

Prep Batch: 30518

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1

1

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: LCS 880-30518/1-A

Matrix: Solid

Analysis Batch: 30501

Job ID: 890-2599-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Batch: 30518

**Client Sample ID: Lab Control Sample** 

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

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
o-Xylene			0.100	0.1051		mg/Kg		105	70 - 130		
	LCS	105									
Surrogate	%Recovery		Limits								
4-Bromofluorobenzene (Surr)		Quanner	70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: LCSD 880-3	30518/2-A					Clie	nt San	nple ID: I	Lab Contro	I Sample	e Dup
Matrix: Solid									Prep T	Type: Tot	tal/N/
Analysis Batch: 30501									Prep	Batch:	30518
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.09242		mg/Kg		92	70 - 130	5	3
Toluene			0.100	0.1076		mg/Kg		108	70 - 130	4	35
Ethylbenzene			0.100	0.09524		mg/Kg		95	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1950		mg/Kg		98	70 _ 130	7	35
o-Xylene			0.100	0.1121		mg/Kg		112	70 - 130	6	35
	LCSD	LCSD									
Surrogate	%Recovery		Limits								
4-Bromofluorobenzene (Surr)		Quanner	70 - 130								
1,4-Difluorobenzene (Surr)	96		70 - 130								
Lab Sample ID: 880-17291-	A-1-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid	A-1-D MS							Client	Prep T	: Matrix Type: Tot Batch:	tal/N/
Matrix: Solid	A-1-D MS Sample	Sample	Spike	MS	MS			Client	Prep T	Type: To	tal/NA
Lab Sample ID: 880-17291- Matrix: Solid Analysis Batch: 30501 Analyte	Sample	Sample Qualifier	Spike Added		MS Qualifier	Unit	D	Client %Rec	Prep T Prep	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501	Sample	Qualifier	-		Qualifier	_ <mark>Unit</mark> mg/Kg	D		Prep T Prep %Rec	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene	Sample Result	Qualifier U F1	Added	Result	Qualifier F1		D_	%Rec	Prep 1 Prep %Rec Limits	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte	Sample 	Qualifier U F1 U F1 F2	Added	<b>Result</b> 0.06616	Qualifier F1 F1	mg/Kg	<u>D</u>	%Rec 66	Prep T Prep %Rec Limits 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene	Sample Result <0.00201 <0.00201	<b>Qualifier</b> U F1 U F1 F2 U F1 F2	Added 0.0998 0.0998	<b>Result</b> 0.06616 0.05990	Qualifier F1 F1 F1	mg/Kg mg/Kg	<u>D</u>	% <b>Rec</b> 66 60	Prep T Prep %Rec Limits 70 - 130 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene	Sample Result <0.00201 <0.00201 <0.00201	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2	Added 0.0998 0.0998 0.0998	Result 0.06616 0.05990 0.04126	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg	<u>D</u>	%Rec 66 60 41	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2	Added 0.0998 0.0998 0.0998 0.200	Result           0.06616           0.05990           0.04126           0.08208	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<b>%Rec</b> 66 60 41 41	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 <i>MS</i>	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Added 0.0998 0.0998 0.0998 0.200	Result           0.06616           0.05990           0.04126           0.08208	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<b>%Rec</b> 66 60 41 41	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate	Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2	Added 0.0998 0.0998 0.200 0.200 0.0998	Result           0.06616           0.05990           0.04126           0.08208	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	<b>%Rec</b> 66 60 41 41	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Added 0.0998 0.0998 0.200 0.0998 Limits	Result           0.06616           0.05990           0.04126           0.08208	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	<b>%Rec</b> 66 60 41 41	Prep T           Prep           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: To	tal/NA
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	Sample           Result           <0.00201	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Added           0.0998           0.0998           0.0998           0.200           0.0998	Result           0.06616           0.05990           0.04126           0.08208	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 66 60 41 41 46	Prep T           %Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	Type: Tot Batch:	tal/NA 30518
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4	Sample           Result           <0.00201	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Added           0.0998           0.0998           0.0998           0.200           0.0998	Result           0.06616           0.05990           0.04126           0.08208	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 66 60 41 41 46	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Dike Dup	tal/NA 30518
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4 Matrix: Solid	Sample           Result           <0.00201	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS	Added           0.0998           0.0998           0.0998           0.200           0.0998	Result           0.06616           0.05990           0.04126           0.08208	Qualifier F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 66 60 41 41 46	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Dike Dup	tal/NA 30518
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4 Matrix: Solid	Sample Result <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 96 99 A-1-E MSD	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier	Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.0998           1.00           70 - 130           70 - 130	Result           0.06616           0.05990           0.04126           0.08208           0.04570	<b>Qualifier</b> F1 F1 F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 66 60 41 41 46	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep T Prep T	Dike Dup	blicate tal/NA 30518
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4 Matrix: Solid Analysis Batch: 30501	Sample Result <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 96 99 A-1-E MSD Sample	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier	Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.0998           Dimits           70 - 130           70 - 130           Spike	Result           0.06616           0.05990           0.04126           0.08208           0.04570	Qualifier F1 F1 F1 F1 F1 F1 MSD	mg/Kg mg/Kg mg/Kg mg/Kg	ient S	%Rec 66 60 41 41 46	Prep T Prep %Rec Limits 70 - 130 70 - 190 %Rec	Dike Dup Dike Tot Dike Tot Distance:	blicate tal/NA 30518 30518 tal/NA 30518 RPI
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4 Matrix: Solid Analysis Batch: 30501 Analyte	Sample Result <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 96 99 A-1-E MSD Sample Result	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier Sample Qualifier	Added 0.0998 0.0998 0.200 0.0998 Limits 70 - 130 70 - 130 70 - 130	Result           0.06616           0.05990           0.04126           0.08208           0.04570	Qualifier F1 F1 F1 F1 F1 MSD Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg Cl		%Rec 66 60 41 41 46 ample IE	Prep T Prep %Rec Limits 70 - 130 70 - 190 70 - 130 70 - 190 70 - 1	Dike Dup Dike Dup Dype: Tot Batch: 	blicate tal/NA 30518 tal/NA 30518 RPE Limi
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4 Matrix: Solid Analysis Batch: 30501 Analyte Benzene	Sample Result <0.00201 <0.00201 <0.00201 <0.00402 <0.00201 MS %Recovery 96 99 A-1-E MSD Sample Result <0.00201	Qualifier U F1 U F1 F2 U F1 F2 U F1 F2 U F1 F2 MS Qualifier Qualifier U F1	Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130           0.100	Result           0.06616           0.05990           0.04126           0.08208           0.04570	Qualifier F1 F1 F1 F1 F1 F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg Cl	ient S	%Rec           66           60           41           41           46	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 7 Prep 7 %Rec Limits 70 - 130	Dike Dup Type: Tot Dike Dup Type: Tot Batch: RPD 28	licate tal/NA 30518
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4 Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene	Sample           Result           <0.00201	Qualifier           U F1           U F1 F2           U F1 F2           U F1 F2           U F1 F2           MS           Qualifier           U F1           U F1           U F1	Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           Limits           70 - 130           70 - 130           70 - 130           Spike           Added           0.100	Result           0.06616           0.05990           0.04126           0.08208           0.04570	Qualifier F1 F1 F1 F1 F1 F1 F1 F1 F1 F1 F2	mg/Kg mg/Kg mg/Kg mg/Kg Cl Unit mg/Kg mg/Kg	ient S	%Rec           66           60           41           41           46	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130	Dike Dup Type: Tot Dike Dup Type: Tot Batch: 28 49	blicate tal/NA 30518 blicate tal/NA 30518 RPE Limi 33 33
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4 Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene	Sample Result <0.00201 <0.00201 <0.00402 <0.00402 <0.00201 MS %Recovery 96 99 A-1-E MSD Sample Result <0.00201 <0.00201 <0.00201	Qualifier           U F1           U F1 F2           U F1 F2           U F1 F2           U F1 F2           MS           Qualifier           U F1	Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           D.200           0.0998           Limits           70 - 130           70 - 130           70 - 130           70 - 130           0.100           0.100           0.100           0.100	Result           0.06616           0.05990           0.04126           0.08208           0.04570	Qualifier F1 F1 F1 F1 F1 F1 F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg Cl Unit mg/Kg mg/Kg mg/Kg	ient S	%Rec           66           60           41           41           46	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Dike Dup Dike Dup Type: Tot Batch: 28 49 61	blicate tal/NA 30518 30518 tal/NA 30518 RPE Limi 38 38 38
Matrix: Solid Analysis Batch: 30501 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-17291-4	Sample           Result           <0.00201	Qualifier           U F1           U F1 F2           U F1 F2           U F1 F2           U F1 F2           MS           Qualifier           U F1           U F1 F2           U F1 F2           U F1 F2           U F1 F2	Added           0.0998           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           0.200           0.0998           Limits           70 - 130           70 - 130           70 - 130           Spike           Added           0.100	Result           0.06616           0.05990           0.04126           0.08208           0.04570	Qualifier F1 F1 F1 F1 F1 F1 F1 F1 F1 F1	mg/Kg mg/Kg mg/Kg mg/Kg Cl Unit mg/Kg mg/Kg	ient S	%Rec           66           60           41           41           46	Prep T Prep 7 %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 9: Matrix Sp Prep 7 Prep 7 %Rec Limits 70 - 130 70 - 130	Dike Dup Type: Tot Dike Dup Type: Tot Batch: 28 49	tal/NA 30518 plicate tal/NA

Eurofins Carlsbad

Client: Ensolum

# **QC Sample Results**

Job ID: 890-2599-1 SDG: 03E1558056

Prep Type: Total/NA

Prep Type: Total/NA

Analyzed

07/26/22 09:44

07/26/22 09:44

07/26/22 09:44

Analyzed

07/26/22 09:44

07/26/22 09:44

%Rec

Prep Batch: 30622

Dil Fac

1

1

1

Dil Fac

Prep Batch: 30518

#### Project/Site: BEU 5E HAN SOLO 105H Method: 8021B - Volatile Organic Compounds (GC) (Continued) Lab Sample ID: 880-17291-A-1-E MSD **Client Sample ID: Matrix Spike Duplicate** Matrix: Solid Analysis Batch: 30501 MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 92 70 - 130 1,4-Difluorobenzene (Surr) 104 70 - 130 Method: 8015B NM - Diesel Range Organics (DRO) (GC) Lab Sample ID: MB 880-30622/1-A **Client Sample ID: Method Blank** Matrix: Solid Analysis Batch: 30645 MB MB Analyte Result Qualifier RL Unit D Prepared Gasoline Range Organics <50.0 U 50.0 07/25/22 16:23 mg/Kg (GRO)-C6-C10 **Diesel Range Organics (Over** <50.0 U 50.0 mg/Kg 07/25/22 16:23 C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 07/25/22 16:23 MB MB Surrogate %Recovery Qualifier Limits Prepared 1-Chlorooctane 98 70 - 130 07/25/22 16:23 o-Terphenyl 110 70 - 130 07/25/22 16:23 Lab Sample ID: LCS 880-30622/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid Analysis Batch: 30645 LCS LCS Spike

Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	957.4	mg/k	ig –	96	70 - 130	
(GRO)-C6-C10							
Diesel Range Organics (Over	1000	926.5	mg/k	g	93	70 - 130	
C10-C28)							
165.1	<b>C</b> S						

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	114		70 - 130

#### Lab Sample ID: LCSD 880-30622/3-A Matrix: Solid Analysis Batch: 30645

Analysis Batch: 30645							Prep	Batch:	30622
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	988.4		mg/Kg		99	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	863.8		mg/Kg		86	70 - 130	7	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	104		70 - 130

		/01100		
Limit	RPD	Limits	%Rec	D
20	3	70 - 130	99	

Client Sample ID: Lab Control Sample Dup

**Eurofins Carlsbad** 

Prep Type: Total/NA

MS MS

1163

789.8

Result Qualifier

Spike

Added

1000

1000

Limits

70 - 130

70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 880-17280-A-18-D MS

Lab Sample ID: 880-17280-A-18-E MSD

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate 1-Chlorooctane

o-Terphenyl

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

Matrix: Solid

Analysis Batch: 30645

Gasoline Range Organics

Diesel Range Organics (Over

Analysis Batch: 30645

Gasoline Range Organics (GRO)-C6-C10

**Diesel Range Organics (Over** 

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

Sample Sample

<50.0 U

<50.0 U

88

85

92

MS MS %Recovery Qualifier

Result Qualifier

Prep Type: Total/NA

Prep Batch: 30622

**Client Sample ID: Matrix Spike** 

%Rec

Limits

70 - 130

70 - 130

5	
7	
8	
8 9	
9	

94		70 - 130									9
-E MSD					CI	ient Sa	ample IC	): Matrix S			10
								Prep	Type: To Batch:	30622	11
Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	12
<50.0	U	999	1054		mg/Kg		106	70 - 130	10	20	
<50.0	U	999	773.5		mg/Kg		77	70 - 130	2	20	13
MSD	MSD										14
WSD	WSD										
%Recovery	Qualifier	Limits									

Unit

mg/Kg

mg/Kg

D

%Rec

116

79

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

Lab Sample ID: MB 880-30245/1-A Matrix: Solid									Client S	ample ID: Me Prep Ty		
Analysis Batch: 30486												
	MB	MB										
Analyte	Result	Qualifier		RL		Unit		<u> </u>	repared	Analyzed		Dil Fac
Chloride	<5.00	U		5.00		mg/K	g			07/24/22 23:0	00	1
								Clien	t Sample	ID: Lab Cont	rol Sa	mple
Matrix: Solid										Prep Ty	pe: So	luble
Analysis Batch: 30486												
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250		264.1		mg/Kg		106	90 - 110		
							CI	ient San	nple ID:	Lab Control S	ample	) Dup
Matrix: Solid									· · ·	Prep Ty	pe: So	luble
Analysis Batch: 30486												
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250		265.5		mg/Kg		106	90 - 110	1	20

Eurofins Carlsbad

Released to Imaging: 11/23/2022 1:52:32 PM

# QC Sample Results

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2599-1 SDG: 03E1558056

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

Lab Sample ID: 890-2598-A-2-E	B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 30486											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	148		249	410.1		mg/Kg		105	90 - 110		
- Lab Sample ID: 890-2598-A-2-0 Matrix: Solid Analysis Batch: 30486	C MSD					Cli	ient S	ample IC	): Matrix Sp Prep	pike Dup Type: S	
Matrix: Solid		Sample	Spike	MSD	MSD	Cli	ient Si	ample ID			
Matrix: Solid	Sample	Sample Qualifier	Spike Added		MSD Qualifier	Cli	ient Sa D	ample ID %Rec	Prep		oluble

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# **QC Association Summary**

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

Method Blank

Matrix Spike

PH02

Lab Sample ID

MB 880-30503/5-A

LCS 880-30503/1-A

LCSD 880-30503/2-A

890-2631-A-1-C MSD

890-2631-A-1-B MS

890-2599-1

#### Analysis Batch: 30499

	Job ID: 890-2599-1 SDG: 03E1558056	
Method	Prep Batch	
8021B	30503	5
8021B	30503	Ð
8021B	30503	

8

#### Analysis Batch: 30501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-2599-2	PH02A	Total/NA	Solid	8021B	30518	9
MB 880-30518/5-A	Method Blank	Total/NA	Solid	8021B	30518	
LCS 880-30518/1-A	Lab Control Sample	Total/NA	Solid	8021B	30518	
LCSD 880-30518/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30518	
880-17291-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30518	
880-17291-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30518	
Prep Batch: 30503						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	10
890-2599-1	PH02	Total/NA	Solid	5035		15

#### Prep Batch: 30503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2599-1	PH02	Total/NA	Solid	5035	
MB 880-30503/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30503/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30503/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2631-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-2631-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Prep Batch: 30518

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2599-2	PH02A	Total/NA	Solid	5035	
MB 880-30518/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30518/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30518/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17291-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17291-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 30609

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2599-1	PH02	Total/NA	Solid	Total BTEX	
890-2599-2	PH02A	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Prep Batch: 30622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2599-1	PH02	Total/NA	Solid	8015NM Prep	
890-2599-2	PH02A	Total/NA	Solid	8015NM Prep	
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Eurofins Carlsbad

# **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

#### Job ID: 890-2599-1 SDG: 03E1558056

# GC Semi VOA

## Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2599-1	PH02	Total/NA	Solid	8015B NM	30622
390-2599-2	PH02A	Total/NA	Solid	8015B NM	30622
/IB 880-30622/1-A	Method Blank	Total/NA	Solid	8015B NM	30622
CS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30622
CSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30622
80-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30622
80-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30622
nalysis Batch: 30756					
_ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
390-2599-1	PH02	Total/NA	Solid	8015 NM	
390-2599-2	PH02A	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 30245

880-17280-A-18-E MSD	Matrix Spike Duplicate	Iotal/NA	Solid	8015B NM	30622	•
Analysis Batch: 30756						8
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	9
890-2599-1	PH02	Total/NA	Solid	8015 NM		
890-2599-2	PH02A	Total/NA	Solid	8015 NM		10
HPLC/IC						
						11
each Batch: 30245						
Leach Batch: 30245		Dean Time	Maderice	Motherd	Dren Betch	12
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	12
Lab Sample ID 890-2599-1	PH02	Soluble	Solid	DI Leach	Prep Batch	12
Lab Sample ID	· · · · · · · · · · · · · · · · · · ·				Prep Batch	12 13
Lab Sample ID 890-2599-1	PH02	Soluble	Solid	DI Leach	Prep Batch	12 13
Lab Sample ID 890-2599-1 890-2599-2	PH02 PH02A	Soluble	Solid Solid	DI Leach DI Leach	Prep Batch	12 13 14
Lab Sample ID 890-2599-1 890-2599-2 MB 880-30245/1-A	PH02 PH02A Method Blank	Soluble Soluble Soluble	Solid Solid Solid	DI Leach DI Leach DI Leach	Prep Batch	12 13 14
Lab Sample ID 890-2599-1 890-2599-2 MB 880-30245/1-A LCS 880-30245/2-A	PH02 PH02A Method Blank Lab Control Sample	Soluble Soluble Soluble Soluble	Solid Solid Solid Solid	DI Leach DI Leach DI Leach DI Leach DI Leach	Prep Batch	12 13 14
Lab Sample ID 890-2599-1 890-2599-2 MB 880-30245/1-A LCS 880-30245/2-A LCSD 880-30245/3-A	PH02 PH02A Method Blank Lab Control Sample Lab Control Sample Dup	Soluble Soluble Soluble Soluble Soluble	Solid Solid Solid Solid Solid	DI Leach DI Leach DI Leach DI Leach DI Leach DI Leach	Prep Batch	12 13 14

#### Analysis Batch: 30486

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2599-1	PH02	Soluble	Solid	300.0	30245
890-2599-2	PH02A	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
890-2598-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	30245
890-2598-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

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4 5 6

Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2599-1 SDG: 03E1558056

# Lab Sample ID: 890-2599-1

**Client Sample ID: PH02** Date Collected: 07/19/22 08:55 Date Received: 07/19/22 15:58

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30503	07/25/22 08:40	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30499	07/25/22 15:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30609	07/25/22 15:51	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30756	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 16:27	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 01:37	СН	XEN MID

# **Client Sample ID: PH02A**

Date Collected: 07/19/22 09:00 Date Received: 07/19/22 15:58

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	30518	07/25/22 09:31	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30501	07/25/22 12:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30609	07/25/22 15:51	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30756	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 16:48	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 01:44	СН	XEN MID

#### Laboratory References:

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

# Matrix: Solid

Lab Sample ID: 890-2599-2

Matrix: Solid

**5** 6 9

		Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: BEU 5E H	IAN SOLO 105H			Job ID: 890-2599-1 SDG: 03E1558056	2
Laboratory: Eurofi		ry were covered under each acc	raditation/contification below		
Authority		Program	Identification Number	Expiration Date	
Texas		NELAP	T104704400-22-24	06-30-23	
The following applytes	are included in this repo	ort, but the laboratory is not cortif	ied by the governing authority. This list ma	av include analytes for which	5
the agency does not of			ied by the governing autionty. This ist his		6
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					40
					13

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# **Method Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2599-1 SDG: 03E1558056

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	E
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 Refe	rences:			8
ASTM = AS	STM International			
MCAWW =	"Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 19	83 And Subsequent Revisions.		9
SW846 = "	Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, N	November 1986 And Its Updates.		
TAL SOP =	- TestAmerica Laboratories, Standard Operating Procedure			

#### Protocol References:

#### Laboratory References:

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

11 12 13 14

# **Sample Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2599-1 SDG: 03E1558056

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
390-2599-1	PH02	Solid	07/19/22 08:55	07/19/22 15:58	1	4
390-2599-2	PH02A	Solid	07/19/22 09:00	07/19/22 15:58	2	
						5
						8
						9
						12
						1:

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

**Chain of Custody** 

Project Manager:     Ben Betill       Compary Name:     Ensolum, LLC       Address:     3122 National       City, State ZIP:     Carlsbad, NM       Phone:     9898540852       Project Number:     9898540852       Project Number:     03       Project Number:     03       Project Location:     EDDY (       Sampler's Name:     Con       Project Location:     Con       Project Location:     Con       Sampler's Name:     Con       Project Location:     Fight       Project Location:     Fight       Project Location:     Con       Project Location:     Con       Project Location:     Fight       Project Location: <td< th=""><th>Ben Belill Ensolum, LLC 3122 National parks Hwy Carlsbad, NM 88220 9898540852</th><th></th><th></th><th>ÖL</th><th>c) MN (sac</th><th>1-765 (c)</th><th>ou, cans</th><th>Dad, NM (0</th><th>HODDS, NM (5/5) 392-/550, Cansoad, NM (5/5) 900-3139</th><th>3</th><th>www.xenco.com</th><th>Page 1 of</th></td<>	Ben Belill Ensolum, LLC 3122 National parks Hwy Carlsbad, NM 88220 9898540852			ÖL	c) MN (sac	1-765 (c)	ou, cans	Dad, NM (0	HODDS, NM (5/5) 392-/550, Cansoad, NM (5/5) 900-3139	3	www.xenco.com	Page 1 of
Manager: Ben ny Name: Ens si: 312: ate ZIP: Carl ate ZIP: Carl Number: Carl Location: r's Name: r's Name:	III -, LLC -, LLC -									A		
ny Name: Ens ate ZIP: Carl ate ZIP: Carl Number: 9989 Name: 9989 Name: Coation: r's Name: r's Name: Coation: r's Name: Coation: r's Name: Plocation: PH02A PH02A PH02A	n, LLC ational parks H d, NM 88220 D852			Bill to: (if different)		Garrett Green	een				Work Order Comments	nments
s: 312: ate ZIP: Carl Mame: 9899 Number: 6881 Number: r's Name: r's Name: r's Name: r's Name: custody Seals: Custody Seals: 01tainers: 01tainer	ational parks H d, NM 88220 1852			Company Name		XTO Energy, Inc.	gy, Inc.			Program: UST/PST	🗌 PRP 🗍 Brownfields 🗍 RRC 🗍	elds 🗌 RRC 🔲 Superfund 🗍
ate ZIP: Carl Mame: 9899 Number: Location: r's Name: r's Name: r's Name: Custody Seals: Custody Seals: Custody Seals: PH02A PH02A PH02A	d, NM 88220 1852	w		Address:		3104 E. Green Street	reen St	eet		State of Project:		
989 Name: Number: Number: ILE RECEIPT S Received Intact: Custody Seals: Oustody Seals: PH02 PH02	3852			City, State ZIP:		Carlsbad, NM 88220	NM 882	20		Reporting: Level II Level III RPST/UST	Level III DST/US	ST 🗌 TRRP 🔲 Level IV 📙
t Number: t Number: t Location: ler's Name: ler's Name: les Received Intact: Custody Seals: e Custody Seals: containers: PH02 PH02	1000		Email:	Email: <u>bbelil@ensolum.com</u>	olum.con					Deliverables: EDD	🗌 ADaPT 🛛	Dother:
It Number: It Location: Ier's Name: PLE RECEIPT les Received Intact: r Custody Seals: Containers: Sample Identificatio PH02 PH02	BEU 5E HAN SOLO 105H	O 105H	Turn	Turn Around					ANALYSIS RI	REQUEST	-	ervativ
I Location: Ier's Name: PLE RECEIPT Ies Received Intact: Containers: Containers: PH02 PH02	03E1558056	9	Soutine	Rush	Pres.	-	_				Ň	None: NO DI Water: H <sub>2</sub> O
Ier's Name: PLE RECEIPT PLE RECEIPT Custody Seals: Containers: Sample Identification PH02A PH02A	EDDY COUNTY, NM	, NM	Due Date:								<u>Ö</u>	~
PLE RECEIPT les Received Intact: r Custody Seals: Y Containers: Sample Identification PH02 PH02A	Conner Shore	e	TAT starts the day rec the lab, if received by	TAT starts the day received by the lab, if received by 4:30pm				·			H H	HCL: HC HNO <sub>3</sub> : HN H <sub>2</sub> S04: H <sub>2</sub> NaOH: Na
	Teppe Blank:	Mes No	Wet Ice:	ON SOM	neter	(0					H <sub>3</sub> F	
	Yes No	Thermometer ID:	:0:	Than D	ue 1 0	008					Nai	NaHSO4: NABIS
		WA Correction Factor:	actor:	-0-	Pai	: Ve			890-2599 CI	890-2599 Chain of Custody	Na;	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
	Yes No NIA	N/A/ Temperature Reading:	Reading:	C.M		I3) 9				-	Z	Zn Acetate+NaOH: Zn
Sample Identification PH02 PH02A		Corrected Temperature:	mperature:	2.6			-				Na Na	NaOH+Ascorbic Acid: SAPC
PH02 PH02A	Matrix	Date Sampled	Time	Depth Grab/ Comp	b/ # of p Cont	тен (8( Снгов	) хэта					Sample Comments
PH02A	S	7/19/2022	\$55	1' Grab/	b/ 1	×	×					Cost Center: 1568871001
	s	7/19/2022	005	2' Grab/	b/ 1	××	×					
2		$\backslash$										
	$\left  \right $										lnc	Incident ID:NAPP2209731445
X												
, //												
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Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020: al(s) to be analy		8RCRA 13P TCLP/S	RA 13PPM Texas 11 AI TCLP / SPLP 6010: 8RCRA	11 AI S BRCRA	Sb As Ba Sb As I	s Ba Be B As Ba Be (	U PO PO PO	a Cr Co Cu Fe Pb M( Co Cu Pb Mn Mo Ni	g Mn Mo Ni K Se Ag Ti U	Se Ag SiO <sub>2</sub> Na Sr T Hg: 1631 / 245.1	Sr TI Sn U V Zn 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 Notice: Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotilat	ind relinquishment able only for the co ge of \$85.00 will be	of samples cont it of samples an applied to each	stitutes a valid p d shali not assu project and a ch	wrchase order fro me any responsi narge of \$5 for ear	om client co bility for any ch sample s	mpany to E iosses or ubmitted to	urofins Xe txpenses Eurofins	nco, its affil Incurred by Xenco, but r	iates and subcontractor the client if such losses ot analyzed. These tern	order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control 15 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	ind conditions and the control iously negotlated.	
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	Xenco				EL Paso, T) Hobbs, NM	< (915) 5{ (575) 392	5-3443, L -7550, Ca	ubbock, T) risbad, NN	EL Paso, TX (915) 585-343, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carisbad, NM (575) 988-3199		~~~~~	www.xenco.com	Page	of 1
Project Manager: Ber	Ben Belill			Bill to: (if dif	(if different)	Garret	Garrett Green				3	Work Order Comments	mments	
	Ensolum 11 C			Company Name:	lame:	XTOE	XTO Energy. Inc.			Progr	Program: UST/PST	RP Brownfields RRC	elds   RRC	Superfund
T	3122 National parks Hwy	M		Address:		3104 E	3104 E. Green Street	Street		State	State of Project:	1	1	
te ZIP:	Carlsbad, NM 88220			City, State ZIP:	ZIP:	Carlsb	Carlsbad, NM 88220	3220		Repor	Reporting: Level II Clevel III C PST/UST	wel III	ST 🗌 TRRP 🛛	
	9898540852		Email: bbelil	bbelil@er	@ensolum.com	ε				Delive	Deliverables: EDD	ADaPT	D Other:	
Project Name:	BEU 5E HAN SOLO 105H	O 105H	Turn	Turn Around					ANALY	ANALYSIS REQUEST			Preservat	Preservative Codes
Project Number:	03E1558056	9	Soutine	🛛 Rush	Pres. Code							Ŷ	None: NO	DI Water: H <sub>2</sub> O
Project Location:	EDDY COUNTY, NM	Y, NM	Due Date:									- -	Cool: Cool	MeOH: Me
Sampler's Name: PO #:	Conner Shore	ē	TAT starts the day received by the lab, if received by 4:30pm	day receive eived by 4:30								H T	HCL: HC H <sub>2</sub> S04: H <sub>2</sub>	HNU3: HN NaOH: Na
SAMPLE RECEIPT	Tepag Blank:	Res No	Wet Ice:	Nes No	o	(0						H3	H₃PO₄: HP	
Samples Received Intact:	+-	Thermometer ID:		122	T	.00£						Na	NaHSO4: NABIS	
Cooler Custody Seals:	Yes No	WA Correction Factor:	actor:	-0-	ed A	:Aq			890-25	890-2599 Chain of Custody	stody	Na	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	
Sample Custody Seals:	No	N/A Temperature Reading:	Reading:	2	6	I) S				-	_	Zu	Zn Acetate+NaOH: Zn	H: Zn
Total Containers:		Corrected Temperature:	imperature:	7	2	BOE				_		Na	NaOH+Ascorbic Acid: SAPC	Acid: SAPC
Sample Identification	ation Matrix	Date Sampled	Time Sampled	c	Grab/ # of Comp Cont	снгов	8) H9T ) X3T8						Sample C	Sample Comments
PH02	S	7/19/2022	\$52	1' G	Grab/ 1	×	x x						Cost Center	Cost Center: 1568871001
PH02A	S	7/19/2022	005	2' G	Grab/ 1	×	×							
				-										
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Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020: letal(s) to be analy		BRCRA 13PPM TCLP / SPLP 6		8RCRA	as s	b As Ba Be B Sb As Ba Be (			· Co Cu Fe Pb Mg Mn Mo Ni K Cu Pb Mn Mo Ni Se Ag Ti U	X Se	Ag SiO <sub>2</sub> Na Sr Hg: 1631 / 245.	TI Sn U 1/7470 /	V Zn 17471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any of Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and a charge of y	nent and relinquishment he liable only for the co charge of \$85.00 will be	of samples cons st of samples an applied to each	tttutes a valid pu d shall not assu project and a ch	irchase order ne any respo arge of \$5 for	from client isibility for a each sample	company t ny losses submitte	o Eurofins or expense 1 to Eurofir	Xenco, its t s incurred s Xenco, b	fifiliates and subco by the client if such it not analyzed. The	ntractors. It assigns losses are due to c se terms will be en	order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions responsibility for any tosses or expenses incurred by the client if such losses are due to circumstances beyond the oontrol \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	conditions I the control sly negotiated.		
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Job Number: 890-2599-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2599 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 ampered 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	
s the Field Sampler's name present on COC?	True	
here are no discrepancies between the containers received and the COC.	True	
amples are received within Holding Time (excluding tests with immediate Ts)	True	
Sample containers have legible labels.	True	
ontainers are not broken or leaking.	True	
ample collection date/times are provided.	True	
ppropriate sample containers are used.	True	
ample bottles are completely filled.	True	
ample Preservation Verified.	N/A	
here is sufficient vol. for all requested analyses, incl. any requested /IS/MSDs	True	

N/A

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

7/27/2022

# Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2599 List Number: 2 Creator: Rodriguez, Leticia

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

Job Number: 890-2599-1 SDG Number: 03E1558056

List Source: Eurofins Midland

List Creation: 07/21/22 10:51 AM

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Eurofins Carlsbad Released to Imaging: 11/23/2022 1:52:32 PM Received by OCD: 8/19/2022 11:50:23 AM

LINKS

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**Have a Question?** 

www.eurofinsus.com/Env

Released to Imaging: 11/23/2022 1:52:32 PM

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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: 890-2600-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

# For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

signature.

Authorized for release by: 7/27/2022 8:19:22 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.

SDG: 03E1558056

Laboratory Job ID: 890-2600-1

# **Table of Contents**

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LOD

LOQ

MCL

MDA

MDC

MDL

MQL NC

ND NEG

POS

PQL PRES

QC

RER

RL RPD

TEF

TEQ

TNTC

ML MPN

	Definitions/Glossary	
Client: Ensolum Project/Site: BF	Job ID: 890-2600- EU 5E HAN SOLO 105H SDG: 03E155805	
Qualifiers		
GC VOA		- 3
Qualifier	Qualifier Description	_ 4
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	5
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		6
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	7
HPLC/IC		
Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	-
Glossary		- 9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	1
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	4
Dil Fac	Dilution Factor	1:
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)	

Limit of Detection (DoD/DOE)

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

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

Minimum Detectable Activity (Radiochemistry)

Project/Site: BEU 5E HAN SOLO 105H

4

5

#### Job ID: 890-2600-1 SDG: 03E1558056

# Job ID: 890-2600-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2600-1

#### Receipt

The samples were received on 7/20/2022 3:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30361 and analytical batch 880-30473 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

#### GC Semi VOA

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.

Project/Site: BEU 5E HAN SOLO 105H

Method: 8021B - Volatile Organic Compounds (GC)

Method: Total BTEX - Total BTEX Calculation

Result Qualifier

Qualifier

<0.00199 U

<0.00199 U

<0.00199 U

<0.00398 U

<0.00199 U

<0.00398 U

106

82

%Recovery

RL

0.00199

0.00199

0.00199

0.00398

0.00199

0.00398

Limits

70 - 130

70 - 130

RL

0.00398

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

07/22/22 10:18

07/22/22 10:18

07/22/22 10:18

07/22/22 10:18

07/22/22 10:18

07/22/22 10:18

Prepared

07/22/22 10:18

07/22/22 10:18

Prepared

Job ID: 890-2600-1 SDG: 03E1558056

# **Client Sample ID: PH04**

Date Collected: 07/19/22 09:45 Date Received: 07/20/22 15:58

Sample Depth: 1'

Client: Ensolum

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

#### Lab Sample ID: 890-2600-1 Matrix: Solid

Analyzed

07/24/22 06:31

07/24/22 06:31

07/24/22 06:31

07/24/22 06:31

07/24/22 06:31

07/24/22 06:31

Analyzed

07/24/22 06:31

07/24/22 06:31

Analyzed

07/25/22 11:06

1

1

1

1

1

1

Dil Fac

Dil Fac

Dil Fac

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	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 17:53	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 17:53	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 17:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			07/25/22 16:23	07/26/22 17:53	1
o-Terphenyl	111		70 - 130			07/25/22 16:23	07/26/22 17:53	1
		Ostuble						
Method: 300.0 - Anions, Ion Chro	• • • •		-		_	- ·		
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.6		5.04	mg/Kg			07/25/22 02:08	1
Client Sample ID: PH04A						Lab Sar	nple ID: 890-	2600-2
Date Collected: 07/19/22 09:50							Matri	x: Solid
Date Received: 07/20/22 15:58								
Sample Depth: 2'								
_ Method: 8021B - Volatile Organic	Compounds	(GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/22/22 10:18	07/24/22 06:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/22/22 10:18	07/24/22 06:51	1

Ethylbenzene <0.00200 U 0.00200 mg/Kg 07/22/22 10:18 07/24/22 06:51 0.00399 m-Xylene & p-Xylene <0.00399 U 07/22/22 10:18 07/24/22 06:51 mg/Kg 1 <0.00200 U 0.00200 07/22/22 10:18 07/24/22 06:51 o-Xylene mg/Kg 1 <0.00399 U 0.00399 07/22/22 10:18 Xylenes, Total mg/Kg 07/24/22 06:51 1 Limits Surrogate %Recovery Qualifier Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 70 - 130 07/22/22 10:18 07/24/22 06:51 109

**Eurofins Carlsbad** 

Analyte Result Qualifier Total BTEX <0.00398 U Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Method: 300.0 - Anions, Ion Chroi	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.6		5.04	mg/Kg			07/25/22 02:08	1

# С D D

<b>Released to Imaging:</b>	11/23/2022	1:52:32	PM

# **Client Sample Results**

Limits

70 - 130

RL

RL

49.9

0.00399

Unit

mg/Kg

Unit

mg/Kg

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

## **Client Sample ID: PH04A**

Date Collected: 07/19/22 09:50 Date Received: 07/20/22 15:58

Sample Depth: 2'

1,4-Difluorobenzene (Surr)

Surrogate

Analyte

Analyte

Total TPH

Total BTEX

Job ID: 890-2600-1
SDG: 03E1558056

# Lab Sample ID: 890-2600-2

Analyzed

07/24/22 06:51

Prepared

07/22/22 10:18

Prepared

Prepared

D

D

Matrix: Solid

5

Analyzed	Dil Fac	
07/25/22 11:06	1	8
American	D!! 5	9
Analyzed	Dil Fac	
07/27/22 08:23	1	
Analyzed	Dil Fac	
07/26/22 18:14	1	

Dil Fac

1

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

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

Method: Total BTEX - Total BTEX Calculation

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

%Recovery Qualifier

Result Qualifier

Result Qualifier

<49.9 U

86

<0.00399 U

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 18:14	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 18:14	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/25/22 16:23	07/26/22 18:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130			07/25/22 16:23	07/26/22 18:14	1
o-Terphenyl	129		70 - 130			07/25/22 16:23	07/26/22 18:14	1
- Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	78.2		5.05	mg/Kg			07/25/22 02:16	1

Project/Site: BEU 5E HAN SOLO 105H

#### Job ID: 890-2600-1 SDG: 03E1558056

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

#### Matrix: Solid

Client: Ensolum

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
260-A-15-B MS	Matrix Spike	114	94	
260-A-15-C MSD	Matrix Spike Duplicate	129	84	
600-1	PH04	106	82	
0-2	PH04A	109	86	
)-30361/1-A	Lab Control Sample	128	98	
30-30361/2-A	Lab Control Sample Dup	117	99	
30361/5-A	Method Blank	104	85	
0-30426/5-A	Method Blank	94	86	
anata I anand				
rogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17280-A-18-D MS	Matrix Spike	88	94
880-17280-A-18-E MSD	Matrix Spike Duplicate	85	92
890-2600-1	PH04	105	111
890-2600-2	PH04A	112	129
LCS 880-30622/2-A	Lab Control Sample	102	114
LCSD 880-30622/3-A	Lab Control Sample Dup	91	104
MB 880-30622/1-A	Method Blank	98	110

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

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

Lab Sample ID: MB 880-30361/5-A Matrix: Solid Analysis Batch: 30473						Client Sa	m
	MB	МВ					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	
Benzene	<0.00200	U	0.00200	mg/Kg		07/22/22 10:18	(
Toluene	<0.00200	U	0.00200	mg/Kg		07/22/22 10:18	(
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/22/22 10:18	(
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/22/22 10:18	
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/22/22 10:18	(
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/22/22 10:18	(

	MB	МВ	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

#### Lab Sample ID: LCS 880-30361/1-A Matrix: Solid

## Analysis Batch: 30473

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09697		mg/Kg		97	70 - 130	
Toluene	0.100	0.1018		mg/Kg		102	70 - 130	
Ethylbenzene	0.100	0.1105		mg/Kg		111	70 - 130	
m-Xylene & p-Xylene	0.200	0.2303		mg/Kg		115	70 - 130	
o-Xylene	0.100	0.1290		mg/Kg		129	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

#### Lab Sample ID: LCSD 880-30361/2-A

# Matrix: Solid

Analysis Ba	itch: 30473							Prep	Batch:	30361
		Spike	LCSD	LCSD				%Rec		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene		0.100	0.07948		mg/Kg		79	70 - 130	20	35
Toluene		0.100	0.08370		mg/Kg		84	70 - 130	20	35
Ethylbenzene		0.100	0.09040		mg/Kg		90	70 - 130	20	35
m-Xylene & p->	(ylene	0.200	0.1865		mg/Kg		93	70 - 130	21	35
o-Xylene		0.100	0.1072		mg/Kg		107	70 - 130	18	35

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

# Lab Sample ID: 880-17260-A-15-B MS

#### Matrix: Solid alveie Rotoby 20472

Analysis Batch: 30473									Prep	Batch: 30361
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F2 F1	0.0998	0.07498		mg/Kg		75	70 - 130	
Toluene	<0.00201	U F1	0.0998	0.07676		mg/Kg		75	70 - 130	

Eurofins Carlsbad

Prep Type: Total/NA

# **Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 30361

Analyzed

Analyzed

Dil Fac

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

Client Sample ID: Lab Control Sample Dup

Prepared

07/22/22 10:18

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 30361

	_	urofir		

**Client Sample ID: Matrix Spike** 

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 880-17260-A Matrix: Solid	A-15-B MS										Client S		ype: To	otal/NA
Analysis Batch: 30473													Batch:	30361
	Sample	Sample		Spike	MS	MS						%Rec		
Analyte	Result			Added	Result	Qualifie	er Ur	nit		D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1		0.0998	0.07639		mę	g/Kg			77	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1		0.200	0.1541		mę	g/Kg			76	70 - 130		
o-Xylene	<0.00201	U F1		0.0998	0.08436		m	g/Kg			85	70 - 130		
	MS	MS												
Surrogate	%Recovery	Qualifier		Limits										
4-Bromofluorobenzene (Surr)				70 - 130										
1,4-Difluorobenzene (Surr)	94			70 - 130										
Lab Sample ID: 880-17260-A	A-15-C MSD							c	Client	Sa	mple ID:	Matrix Sp	ike Du	plicate
Matrix: Solid													ype: To	
Analysis Batch: 30473													Batch:	
-	Sample	Sample		Spike	MSD	MSD						• %Rec		RPD
Analyte	Result	Qualifier		Added	Result	Qualifie	er Ur	nit		D	%Rec	Limits	RPD	Limi
Benzene	<0.00201	U F2 F1		0.100	0.04516	F2 F1	m	g/Kg			45	70 - 130	50	3
Toluene	<0.00201	U F1		0.100	0.05845	F1	m	g/Kg			57	70 - 130	27	3
Ethylbenzene	<0.00201	U F1		0.100	0.06139	F1	m	g/Kg			61	70 - 130	22	3
m-Xylene & p-Xylene	<0.00402	U F1		0.201	0.1216	F1	m	g/Kg			60	70 - 130	24	3
o-Xylene	<0.00201	U F1		0.100	0.06840	F1	m	g/Kg			68	70 - 130	21	3
	MSD	MSD												
Surrogate	%Recovery	Qualifier		Limits										
4-Bromofluorobenzene (Surr)	129			70 - 130										
1,4-Difluorobenzene (Surr)	84			70 - 130										
Lab Sample ID: MB 880-304	26/5-A										Client Sa	mple ID: I	<b>Nethod</b>	Blanl
Matrix: Solid												Prep T	ype: To	otal/N/
Analysis Batch: 30473												Prep	Batch:	3042
		MB MB												
Analyte	R	esult Qua	alifier	RL		U	nit		D	Pr	epared	Analyz	ed	Dil Fa
Benzene	<0.0	0200 U		0.00200		m	g/Kg		0	7/22	2/22 15:06	07/23/22 1	4:49	
Toluene	<0.0	0200 U		0.00200	)	m	g/Kg		0	7/22	2/22 15:06	07/23/22 1	4:49	
Ethylbenzene	<0.0	0200 U		0.00200	)	m	g/Kg		0	7/22	2/22 15:06	07/23/22 1	4:49	
m-Xylene & p-Xylene	<0.0	0400 U		0.00400	)	m	g/Kg		0	7/22	2/22 15:06	07/23/22 1	4:49	
o-Xylene	<0.0	0200 U		0.00200	)	m	g/Kg		0	7/22	2/22 15:06	07/23/22 1	4:49	
Xylenes, Total	<0.0	0400 U		0.00400	)	m	g/Kg		0	7/22	2/22 15:06	07/23/22 1	4:49	
		MB MB												
Surrogate	%Reco	overy Qua	alifier	Limits						Pr	epared	Analyz	ed	Dil Fac
4-Bromofluorobenzene (Surr)		94			-							07/23/22		

1,4-Difluorobenzene (Surr)

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

86

Lab Sample ID: MB 880-30622/1-A Matrix: Solid Analysis Batch: 30645						Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Total/NA
	МВ	МВ					-	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 09:44	1
(GRO)-C6-C10								

70 - 130

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07/22/22 15:06

07/23/22 14:49

Released to Imaging: 11/23/2022 1:52:32 PM

7/27/2022

1

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

## Method: 8015B NI

ethod: 8015B NM - Diesel	Range Orga	nics (DF	20) (GC) (Cc	ontinue	<b>}d)</b>						
ab Sample ID: MB 880-30622/1	I-A							Client S	ample ID: Me	ethod	Blank
Aatrix: Solid									Prep Typ		
Analysis Batch: 30645									Prep Ba		
	MF	в мв							•		
Analyte		It Qualifier	RL	-	Unit		D	Prepared	Analyzed	i	Dil Fac
Diesel Range Organics (Over	<50.0	<u>ວັບ</u>	50.0	,	mg/Kg	g		07/25/22 16:23			1
C10-C28)						5					
Oll Range Organics (Over C28-C36)	<50.0	) U	50.0	1	mg/Kg	'à		07/25/22 16:23	07/26/22 09:4	.44	1
	мі	B MB									
Surrogate	%Recovery		Limits					Prepared	Analyzed	ı –	Dil Fac
1-Chlorooctane			70 - 130	•				07/25/22 16:23			1
o-Terphenyl	110		70 - 130 70 - 130					07/25/22 16:23			1
э-тегрпену		'	70 - 700					01/20/22 10.20	01/20/22 00	44	I
Lab Sample ID: LCS 880-30622/2	/ <b>2-A</b>						C	lient Sample	ID: Lab Con	trol Sr	ample
Matrix: Solid									Prep Typ		-
Analysis Batch: 30645									Prep Ba		
······································			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit		D %Rec	Limits		
Gasoline Range Organics			1000	957.4		mg/Kg		96	70 - 130		
(GRO)-C6-C10						0 0					
Diesel Range Organics (Over			1000	926.5		mg/Kg		93	70 - 130		
C10-C28)											
	LCS LC	s									
Surrogate	%Recovery Qua		Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	114		70 - 130								
, lophony.			10 - 100								
Lab Sample ID: LCSD 880-30622	.2/3-A					Cli	ent	Sample ID: L	ab Control S	3ampl/	e Dup
Matrix: Solid								-	Prep Typ		
Analysis Batch: 30645									Prep Ba		
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D %Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	988.4		mg/Kg		99	70 - 130	3	20
(GRO)-C6-C10						<u> </u>					
Diesel Range Organics (Over			1000	863.8		mg/Kg		86	70 - 130	7	20
C10-C28)											
	LCSD LCS	SD									
Surrogate	%Recovery Qua		Limits								
1-Chlorooctane	91		70 - 130								
o-Terphenyl	104		70 - 130 70 - 130								
o-Terphenyi	104		10 - 130								
Lab Sample ID: 880-17280-A-18-	J-D MS							Client '	Sample ID: M	<b>Aatrix</b>	Spike
Matrix: Solid	Dino							Chorre -	Prep Typ		
									1 100 130	/e	,0,1115

#### Lab Sample ID: 880-Matrix: Solid

Analysis Batch: 30645									Pre	p Batch: 30622
	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	1163		mg/Kg		116	70 - 130	· ·
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	789.8		mg/Kg		79	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	94		70 - 130

Job ID: 890-2600-1

SDG: 03E1558056

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Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

Matrix: Solid									Prep 1	Type: To	otal/NA
Analysis Batch: 30645									Prep	Batch:	30622
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1054		mg/Kg		106	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	773.5		mg/Kg		77	70 - 130	2	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	85		70 - 130								
o-Terphenyl	92		70 - 130								
lethod: 300.0 - Anions, Ior Lab Sample ID: MB 880-30245/ Matrix: Solid Analysis Batch: 30486		ography						Client S	ample ID: Prep	Method Type: S	
	_	MB MB				-					
Analyte		esult Qualifier		RL	Unit		<u> </u>	Prepared	Analyz		Dil Fa
Chloride	<	5.00 U		5.00	mg/K	g			07/24/22	23:00	
							Cileii		D: Lab C	0111101 3	anu
Matrix: Solid										Type: S	
Matrix: Solid			Spike	LCS	LCS						
Matrix: Solid Analysis Batch: 30486 <sup>Analyte</sup>			Added	Result	LCS Qualifier	Unit	D	%Rec	Prep %Rec Limits		
Matrix: Solid Analysis Batch: 30486 <sup>Analyte</sup>			-			Unit mg/Kg		-	Prep %Rec		
Matrix: Solid Analysis Batch: 30486 Analyte Chloride			Added	Result		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep %Rec Limits	Type: S	olubl
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3024			Added	Result		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep %Rec Limits 90 - 110	Type: S	iolubl
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid			Added	Result		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep %Rec Limits 90 - 110	Type: S	iolubl
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid			Added	Result 264.1		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep %Rec Limits 90 - 110	Type: S	ie Du ie Du
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486			Added 250	Result 264.1 LCSD	Qualifier	mg/Kg	<u>D</u>	<b>%Rec</b>	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: S	ie Du Solubi
Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Analyte			Added 250 Spike	Result 264.1 LCSD	Qualifier	mg/Kg	D	%Rec 106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: S	le Du iolubi colubi RP
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid	45/3-A		Added 250 Spike Added	Result 264.1 LCSD Result	Qualifier	mg/Kg Clie Unit	D	%Rec 106 mple ID: %Rec 106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S ol Sampl Type: S 	le Du solubi RP Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid	45/3-A 45/3 MS		Added 250 Spike Added 250	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier	mg/Kg Clie Unit	D	%Rec 106 mple ID: %Rec 106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep	Type: S ol Sampl Type: S <u></u> 1 : Matrix	le Du Solubi RPI Lim 2 Spik
Lab Sample ID: LCS 880-30245 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid Analysis Batch: 30486	15/3-A 3 MS Sample	•	Added 250 Spike Added	Result 264.1 LCSD Result 265.5	Qualifier	mg/Kg Clie Unit	D	%Rec 106 mple ID: %Rec 106	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID	Type: S ol Sampl Type: S <u></u> 1 : Matrix	le Duj solubli colubli <u>Lim</u> 2 Spike
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid Analysis Batch: 30486 Analysis Batch: 30486	45/3-A 3 MS Sample Result	Sample Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier	mg/Kg Clier Unit Mg/Kg	D	%Rec 106 nple ID: 1 %Rec Client	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits	Type: S ol Sampl Type: S <u></u> 1 : Matrix	le Dup soluble coluble Limi 2 Spike
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid Analysis Batch: 30486 Analysis Batch: 30486	15/3-A 3 MS Sample	•	Added 250 Spike Added 250 Spike	Result 264.1 LCSD Result 265.5	Qualifier LCSD Qualifier MS	mg/Kg Clier Unit mg/Kg	D	%Rec           106           mple ID:           %Rec           106           Client	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	Type: S ol Sampl Type: S <u></u> 1 : Matrix	le Du Solubi RPI Lim 2 Spik
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-A-2-C Matrix: Solid	45/3-A 3 MS Sample Result 148	•	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result	Qualifier LCSD Qualifier MS	Unit Unit mg/Kg	D_ nt Sar D_	%Rec           106           mple ID:           %Rec           106           Client           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	Type: S DI Sampl Type: S <u>RPD</u> 1 2: Matrix Type: S	le Du solubl RP Lim 2 Spik solubl
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid Analysis Batch: 30486	45/3-A 3 MS Sample Result 148 C MSD	Qualifier	Added 250 Spike Added 250 Spike Added 249	Result 264.1 LCSD Result 265.5 MS Result 410.1	Qualifier LCSD Qualifier MS Qualifier	Unit Unit mg/Kg	D_ nt Sar D_	%Rec           106           mple ID:           %Rec           106           Client           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	Type: S ol Sampl Type: S <u> RPD </u> 1 o: Matrix Type: S pike Dup	le Du iolubl RP Lim 2 Spik iolubl
Matrix: Solid Analysis Batch: 30486 Chloride Lab Sample ID: LCSD 880-3024 Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-A-2-B Matrix: Solid Analysis Batch: 30486 Analyte Chloride Lab Sample ID: 890-2598-A-2-C Matrix: Solid	45/3-A 3 MS Sample Result 148 C MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added	Result 264.1 LCSD Result 265.5 MS Result 410.1	Qualifier LCSD Qualifier MS	Unit Unit mg/Kg	D_ nt Sar D_	%Rec           106           mple ID:           %Rec           106           Client           %Rec           105	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	Type: S ol Sampl Type: S <u> RPD </u> 1 o: Matrix Type: S pike Dup	le Du solubl RP Lim 2 Spik solubl

# **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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Job ID: 890-2600-1 SDG: 03E1558056

# GC VOA

Prep	Batch:	30361
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
390-2600-1	PH04	Total/NA	Solid	5035	
90-2600-2	PH04A	Total/NA	Solid	5035	
IB 880-30361/5-A	Method Blank	Total/NA	Solid	5035	
CS 880-30361/1-A	Lab Control Sample	Total/NA	Solid	5035	
CSD 880-30361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
380-17260-A-15-B MS	Matrix Spike	Total/NA	Solid	5035	
380-17260-A-15-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
rep Batch: 30426					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bat
MB 880-30426/5-A	Method Blank	Total/NA	Solid	5035	

#### Lab Sample ID **Client Sample ID** Prep Type Matrix Method Prep Batch 890-2600-1 PH04 Total/NA 8021B Solid 30361 PH04A 890-2600-2 Total/NA Solid 8021B 30361 MB 880-30361/5-A Method Blank Total/NA 8021B 30361 Solid MB 880-30426/5-A Method Blank Total/NA Solid 8021B 30426 LCS 880-30361/1-A Lab Control Sample Total/NA Solid 8021B 30361 Total/NA LCSD 880-30361/2-A Lab Control Sample Dup Solid 8021B 30361 880-17260-A-15-B MS Matrix Spike Total/NA Solid 8021B 30361 880-17260-A-15-C MSD Matrix Spike Duplicate Total/NA Solid 8021B 30361

Analysis Batch: 30567

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2600-1	PH04	Total/NA	Solid	Total BTEX	
890-2600-2	PH04A	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Prep Batch: 30622

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2600-1	PH04	Total/NA	Solid	8015NM Prep	
890-2600-2	PH04A	Total/NA	Solid	8015NM Prep	
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2600-1	PH04	Total/NA	Solid	8015B NM	30622
890-2600-2	PH04A	Total/NA	Solid	8015B NM	30622
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015B NM	30622
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30622
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30622
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30622
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30622

#### Received by OCD: 8/19/2022 11:50:23 AM

**QC** Association Summary

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

## GC Semi VOA

#### Analysis Batch: 30758

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2600-1	PH04	Total/NA	Solid	8015 NM	
890-2600-2	PH04A	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 30245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2600-1	PH04	Soluble	Solid	DI Leach	8
890-2600-2	PH04A	Soluble	Solid	DI Leach	0
MB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach	0
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	3
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2598-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2598-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 30486

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-2600-1	PH04	Soluble	Solid	300.0	30245	
890-2600-2	PH04A	Soluble	Solid	300.0	30245	
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245	
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245	
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245	
890-2598-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	30245	
890-2598-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245	

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Job ID: 890-2600-1 SDG: 03E1558056 Project/Site: BEU 5E HAN SOLO 105H

Job ID: 890-2600-1 SDG: 03E1558056

# Lab Sample ID: 890-2600-1 Matrix: Solid

Date Collected: 07/19/22 09:45 Date Received: 07/20/22 15:58

**Client Sample ID: PH04** 

Client: Ensolum

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	30361	07/22/22 10:18	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30473	07/24/22 06:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30567	07/25/22 11:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30758	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 17:53	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 02:08	СН	XEN MID

# Client Sample ID: PH04A

Date Collected: 07/19/22 09:50 Date Received: 07/20/22 15:58

	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	30361	07/22/22 10:18	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30473	07/24/22 06:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30567	07/25/22 11:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30758	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 18:14	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 02:16	СН	XEN MID

#### Laboratory References:

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

\_\_\_\_\_

#### Lab Sample ID: 890-2600-2 Matrix: Solid

ix: Solid

12 13

	Δ	Accreditation/C	ertification Summary		
Client: Ensolum Project/Site: BEU 5E H/	AN SOLO 105H			Job ID: 890-2600-1 SDG: 03E1558056	2
Laboratory: Eurofin Unless otherwise noted, all ar		re severed under each eac	raditation/contification holow		
				E-minsting Data	
Authority Texas		ogram ELAP	Identification Number T104704400-22-24	Expiration Date 06-30-23	-
					5
The following analytes a the agency does not off		It the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for which	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		
					8
					9
					10
					11
					13
					14

.

# **Method Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2600-1 SDG: 03E1558056

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
lotal BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
OI 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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Eurofins Carlsbad

#### Job ID: 890-2600-1 SDG: 03E1558056

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-2600-1	PH04	Solid	07/19/22 09:45	07/20/22 15:58	1'	4
890-2600-2	PH04A	Solid	07/19/22 09:50	07/20/22 15:58	2'	
						5
						8
						9
						12
						13
**Chain of Custody** 

1	<u>com Page 1 of 1</u>	Work Order Comments	trownfields 🗌 RRC 🗍 Superfund 🗍		] PST/UST 🗍 TRRP 🔲 Level IV 📙	ADaPT 🔲 Other:	Preservative Codes	None: NO DI Water: H <sub>2</sub> O	7	HCL: HC HNU3: HN H <sub>2</sub> S04: H <sub>2</sub> NaOH: Na		NaHSO4: NABIS	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	Zn Acetate+NaOH: Zn	NaUH+Ascorbic Acid: SAPC	Sample Comments	Cost Center: 1568871001				Incident ID:NAPP2209731445			g SiO <sub>2</sub> Na Sr Ti Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471	aled.	nature) Date/Time		
Work Order No:	www.xenco.com	Work Orc	Program: UST/PST  PRP Brownfields RRC	State of Project:	Reporting: Level II CLevel III PST/UST TRRP	Deliverables: EDD Deliverables	REQUEST								or custody									g Min Mo Ni K Se A Se Ag Ti U	tors. It assigns standard terms and conditions seas are due to circumstances beyond the contro arms will be enforced unless previously negotis	jnature) Received by: (Signature)		
Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Catisbad, NM (575) 988-3199		Garrett Green	XTO Energy, Inc.	3104 E. Green Street	Carisbad, NM 88220		ANALYSIS REQUEST					000€	:Aq	(	(21G	CHLOR BTEX (1	x x x	X X X						Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb My Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni	order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control sis for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	Date/Time Relinquished by: (Signature)	2221 50/1	4
		Bill to: (if different)	any Name:		City, State ZIP: 0	Email: bbelil@ensolum.com	Turn Around	utine 🗌 Rush Code	Date:	TAT starts the day received by the lab. if received by 4:30pm	tice: Kee No	A	d		fure:	Ō P	15 1' Grab/ 1	50 2' Grab/ 1						13PPM Texas 11 AI P / SPLP 6010: 8RCRA	a valid purchase order from client con not assume any responsibility for any and a charge of \$5 for each sample si	(Signature)	a Stit That	
Fins Environment Testing Xenco		Ben Belill	Ensolum, LLC	3122 National parks Hwy	Carlsbad, NM 88220		BEU 5E HAN SOLO 105H	03E1558056	EDDY COUNTY, NM Due Date:	Conner Shore TAT st the lat	Temp Blank: Tes No	-	: Yes No NIA Correction Factor:	Yes No NIA	Corrected Temperature:	Matrix Date Sampled	S 7/19/2022 945							200.8 / 6020: 8RC Metal(s) to be analyzed	mples constitu samples and sh ied to each proj	(Signature) Received by: (Signature)	LAN M	
😽 eurofins		Project Manager:			te ZIP:		Project Name:	Project Number:	Project Location:	Sampler's Name:	SAMPLE RECEIPT	Samples Received Intact:	Cooler Custody Seals:	Sample Custody Seals:	Total Containers:	Sample Identification	PH04	PH04A			-	X	X	Total 200.7 / 6010 Circle Method(s) and M	Notice: Signature of this di of service. Eurofins Xencc of Eurofins Xenco. A mini-	Relinquished by: (Signature)	くた	3

7/27/2022

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Job Number: 890-2600-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2600 List Number: 1 Creator: Stutzman, Amanda

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or ampered 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	
s the Field Sampler's name present on COC?	True	
here are no discrepancies between the containers received and the COC.	True	
Camples are received within Holding Time (excluding tests with immediate	True	
ample containers have legible labels.	True	
containers are not broken or leaking.	True	
ample collection date/times are provided.	True	
ppropriate sample containers are used.	True	
ample bottles are completely filled.	True	
ample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	

N/A

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

#### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 2600 List Number: 2 Creator: Rodriguez, Leticia

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

Job Number: 890-2600-1 SDG Number: 03E1558056

List Source: Eurofins Midland List Creation: 07/21/22 10:51 AM

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Received by OCD: 8/19/2022 11:50:23 AM

LINKS

Review your project results through

EOL

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Released to Imaging: 11/23/2022 1:52:32 PM

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# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-2601-1

Laboratory Sample Delivery Group: 03E1558056 Client Project/Site: BEU 5E HAN SOLO 105H

#### For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 7/27/2022 8:19:39 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

SDG: 03E1558056

Laboratory Job ID: 890-2601-1

# **Table of Contents**

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Sample Summary	19
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Decision Level Concentration (Radiochemistry)

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

Minimum Detectable Concentration (Radiochemistry)

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

Estimated Detection Limit (Dioxin)

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

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

DLC

EDL

LOD

LOQ MCL

MDA MDC

MDL

MQL NC

ND

NEG

POS

PQL PRES

QC

RL RPD

TEF

TEQ

TNTC

RER

ML MPN

	Definitions/Glossary		
Client: Ensolu			ï
Project/Site: B	EU 5E HAN SOLO 105H SDG: 03E1	558056	
Qualifiers			
GC VOA			ł
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		ŝ
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			ŝ
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			i
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		i
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		

7/27/2022

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#### Job ID: 890-2601-1 SDG: 03E1558056

#### Job ID: 890-2601-1

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2601-1

#### Receipt

The samples were received on 7/19/2022 3:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-30503 and analytical batch 880-30499 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30658 and analytical batch 880-30649 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.

Job ID: 890-2601-1 SDG: 03E1558056

#### Client Sample ID: PH03

Date Collected: 07/19/22 09:25 Date Received: 07/19/22 15:58

Sample Depth: 1

Client: Ensolum

Lab Sample ID: 890-2601-1

# Matrix: Solid

Analyte	Result	(GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
enzene	< 0.00198	U	0.00198	mg/Kg		07/25/22 08:40	07/25/22 14:33	1
oluene	<0.00198		0.00198	mg/Kg		07/25/22 08:40	07/25/22 14:33	1
thylbenzene	<0.00198	U	0.00198	mg/Kg		07/25/22 08:40	07/25/22 14:33	1
-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		07/25/22 08:40	07/25/22 14:33	1
-Xylene	<0.00198	U	0.00198	mg/Kg		07/25/22 08:40	07/25/22 14:33	1
ylenes, Total	<0.00396	U	0.00396	mg/Kg		07/25/22 08:40	07/25/22 14:33	1
urrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
-Bromofluorobenzene (Surr)	96		70 - 130			07/25/22 08:40	07/25/22 14:33	1
4-Difluorobenzene (Surr)	86		70 - 130			07/25/22 08:40	07/25/22 14:33	1
lethod: Total BTEX - Total BTEX	Calculation							
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
otal BTEX	<0.00396	U	0.00396	mg/Kg			07/25/22 15:54	1
Nethod: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
otal TPH	<50.0	U	50.0	mg/Kg			07/27/22 08:23	1
/lethod: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
asoline Range Organics GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 17:10	1
iesel Range Organics (Over 10-C28)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 17:10	1
II Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 17:10	1
urrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Chlorooctane	94		70 - 130			07/25/22 16:23	07/26/22 17:10	1
Chlorooctane	94		70 - 130			07/25/22 16:23	07/26/22 17:32	1
Terphenyl	97		70 - 130			07/25/22 16:23	07/26/22 17:10	1
-Terphenyl	110		70 - 130			07/25/22 16:23	07/26/22 17:32	1
lethod: 300.0 - Anions, Ion Chro	matography -	Soluble						
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
hloride	20.8		4.99	mg/Kg			07/25/22 02:24	1
ient Sample ID: PH03A						Lab San	nple ID: 890-	2601-2
te Collected: 07/19/22 09:30							Matri	x: Solid
te Received: 07/19/22 15:58								

Method: 8021B - Volatile Organic Compounds (GC)													
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac						
<0.00201	U	0.00201	mg/Kg		07/25/22 08:40	07/25/22 14:54	1						
<0.00201	U	0.00201	mg/Kg		07/25/22 08:40	07/25/22 14:54	1						
<0.00201	U	0.00201	mg/Kg		07/25/22 08:40	07/25/22 14:54	1						
<0.00402	U	0.00402	mg/Kg		07/25/22 08:40	07/25/22 14:54	1						
<0.00201	U	0.00201	mg/Kg		07/25/22 08:40	07/25/22 14:54	1						
<0.00402	U	0.00402	mg/Kg		07/25/22 08:40	07/25/22 14:54	1						
	Result           <0.00201	Result         Qualifier           <0.00201	Result         Qualifier         RL           <0.00201	Result         Qualifier         RL         Unit           <0.00201	Result         Qualifier         RL         Unit         D           <0.00201	Result         Qualifier         RL         Unit         D         Prepared           <0.00201	Result         Qualifier         RL         Unit         P         Prepared         Analyzed           <0.00201						

Eurofins Carlsbad

#### **Client Sample Results**

Job ID: 890-2601-1 SDG: 03E1558056

Matrix: Solid

5

Lab Sample ID: 890-2601-2

#### Client Sample ID: PH03A

Date Collected: 07/19/22 09:30 Date Received: 07/19/22 15:58

Sample Depth: 2

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			07/25/22 08:40	07/25/22 14:54	1
1,4-Difluorobenzene (Surr)	76		70 - 130			07/25/22 08:40	07/25/22 14:54	1
_ Method: Total BTEX - Total BTEX	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/25/22 15:54	1
_ Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte		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	<50.0	U	50.0	mg/Kg		07/26/22 08:36	07/26/22 19:21	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/26/22 08:36	07/26/22 19:21	1
C10-C28)								
	<50.0	U	50.0	mg/Kg		07/26/22 08:36	07/26/22 19:21	1
Oll Range Organics (Over C28-C36)								
Oll Range Organics (Over C28-C36) Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
	% <b>Recovery</b> 81	Qualifier	Limits			<b>Prepared</b> 07/26/22 08:36	Analyzed 07/26/22 19:21	Dil Fac
Surrogate		Qualifier				<b>·</b>		Dil Fac 1 1
Surrogate 1-Chlorooctane o-Terphenyl	81 92		70 - 130			07/26/22 08:36	07/26/22 19:21	1
Surrogate 1-Chlorooctane	- 81 92 omatography -		70 - 130	Unit	D	07/26/22 08:36	07/26/22 19:21	1

Page 6 of 22

Job ID: 890-2601-1 SDG: 03E1558056

Prep Type: Total/NA

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

Matrix: Solid

Client: Ensolum

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-2601-1	PH03	96	86		
890-2601-2	PH03A	100	76		6
890-2631-A-1-B MS	Matrix Spike	102	86		
890-2631-A-1-C MSD	Matrix Spike Duplicate	118	89		
LCS 880-30503/1-A	Lab Control Sample	107	97		
LCSD 880-30503/2-A	Lab Control Sample Dup	112	95		
MB 880-30503/5-A	Method Blank	99	86		
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17280-A-18-D MS	Matrix Spike	88	94
880-17280-A-18-E MSD	Matrix Spike Duplicate	85	92
890-2601-1	PH03	94	97
890-2601-1	PH03	94	110
890-2601-2	PH03A	81	92
890-2606-A-1-D MS	Matrix Spike	70	70
890-2606-A-1-E MSD	Matrix Spike Duplicate	71	73
LCS 880-30622/2-A	Lab Control Sample	102	114
LCS 880-30658/2-A	Lab Control Sample	106	111
LCSD 880-30622/3-A	Lab Control Sample Dup	91	104
LCSD 880-30658/3-A	Lab Control Sample Dup	94	101
MB 880-30622/1-A	Method Blank	98	110
MB 880-30658/1-A	Method Blank	74	83

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Lab Sample ID: MB 880-30503/5-A

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

Matrix: Solid Analysis Batch: 30499							Prep Type: 1 Prep Batch	
-	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/25/22 08:40	07/25/22 11:49	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			07/25/22 08:40	07/25/22 11:49	1
1,4-Difluorobenzene (Surr)	86		70 - 130			07/25/22 08:40	07/25/22 11:49	1

#### Lab Sample ID: LCS 880-30503/1-A Matrix: Solid

#### Analysis Batch: 30499

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1004		mg/Kg		100	70 - 130	
Toluene	0.100	0.1002		mg/Kg		100	70 - 130	
Ethylbenzene	0.100	0.1038		mg/Kg		104	70 - 130	
m-Xylene & p-Xylene	0.200	0.2077		mg/Kg		104	70 - 130	
o-Xylene	0.100	0.1147		mg/Kg		115	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: LCSD 880-30503/2-A

#### Matrix: Solid

Analysis Batch: 30499							Prep	Batch:	30503
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09092		mg/Kg		91	70 - 130	10	35
Toluene	0.100	0.09262		mg/Kg		93	70 - 130	8	35
Ethylbenzene	0.100	0.09946		mg/Kg		99	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2016		mg/Kg		101	70 - 130	3	35
o-Xylene	0.100	0.1100		mg/Kg		110	70 - 130	4	35

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

#### Lab Sample ID: 890-2631-A-1-B MS

#### Matrix: Solid \_ \_ \_ \_ \_

Analysis Batch: 30499									Prep	p Batch: 30503
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.06688	F1	mg/Kg		67	70 - 130	
Toluene	<0.00201	U	0.100	0.08166		mg/Kg		81	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

# **Client Sample ID: Method Blank**

Job ID: 890-2601-1

SDG: 03E1558056

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

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 30503

70 - 1	70 - 130		

**Client Sample ID: Matrix Spike** 

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MS MS

0.08891

0.1766

0.09585

**Result Qualifier** 

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.100

0.201

0.100

Limits 70 - 130

70 - 130

70 - 130

70 - 130

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: 890-2631-A-1-B MS

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 30499

4-Bromofluorobenzene (Surr)

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Sample Sample

<0.00201

<0.00402 U

<0.00201 U

102

86

118

89

%Recovery

**Result Qualifier** 

U

MS MS

Qualifier

Job ID: 890-2601-1 SDG: 03E1558056

# 7

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

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

89

88

95

D

#### Matrix: Solid Analysis Batch: 30499

Lab Sample ID: 890-2631-A-1-C MSD

										<b>3 1 1 1</b>		
Analysis Batch: 30499									Prep	Batch:	30503	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	< 0.00201	U F1	0.0998	0.07027		mg/Kg		70	70 - 130	5	35	
Toluene	<0.00201	U	0.0998	0.07904		mg/Kg		79	70 - 130	3	35	Ē
Ethylbenzene	<0.00201	U	0.0998	0.08860		mg/Kg		89	70 - 130	0	35	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1847		mg/Kg		93	70 - 130	5	35	÷
o-Xylene	<0.00201	U	0.0998	0.1004		mg/Kg		101	70 - 130	5	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									

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

#### Lab Sample ID: MB 880-30622/1-A Matrix: Solid Analysis Batch: 30645

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 09:44	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 09:44	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/25/22 16:23	07/26/22 09:44	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130			07/25/22 16:23	07/26/22 09:44	1

70 - 130

1-Chlorooctane	98
o-Terphenyl	110

#### Lab Sample ID: LCS 880-30622/2-A Matrix: Solid

Analysis Batch: 30645						Prep Batch: 30622					
	Spike	LCS	LCS				%Rec				
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits				
Gasoline Range Organics	1000	957.4		mg/Kg		96	70 - 130				
(GRO)-C6-C10											
Diesel Range Organics (Over	1000	926.5		mg/Kg		93	70 - 130				
C10-C28)											

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**Client Sample ID: Matrix Spike** Prep Type: Total/NA Prep Batch: 30503

**Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 30622

#### 07/25/22 16:23 07/26/22 09:44 1 **Client Sample ID: Lab Control Sample**

#### Prep Type: Total/NA

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Lab Sample ID: LCS 880-30622/2-A

Matrix: Solid

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

	1	
Job ID: 890-2601-1 SDG: 03E1558056	2	
Client Semale ID: Lab Control Semale	3	
Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 30622		
	5	
	6	

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Analysis Batch: 30645									Prep	Batch:	30622
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	114		70 - 130								
-											
Lab Sample ID: LCSD 880-3	30622/3-A					Clier	nt San	nple ID:	Lab Contro		
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 30645									Prep	Batch:	30622
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	988.4		mg/Kg		99	70 - 130	3	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	863.8		mg/Kg		86	70 - 130	7	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	91		70 - 130								
o-Terphenyl	104		70 - 130								
Analysis Batch: 30645									Prep	Type: To Batch:	
	-	Sample	Spike	MS	MS				%Rec		
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1163		mg/Kg		116	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	789.8		mg/Kg		79	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	94		70 - 130								
o-Terpnenyi - -	94		70 - 130								
Lab Sample ID: 880-17280-	A-18-E MSD					Cli	ient S	ample IC	D: Matrix Sp	oike Dup	olicate
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 30645									Prep	Batch:	30622
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1054		mg/Kg		106	70 - 130	10	20
Diesel Range Organics (Over	<50.0	U	999	773.5		mg/Kg		77	70 _ 130	2	20

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

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C10-C28)

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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

 Lab Sample ID: MB 880-30658	/1 <b>-A</b>							Client S	ample ID: M		
Matrix: Solid									Prep Ty		
Analysis Batch: 30649									Prep	Batch:	30658
	M	з мв									
Analyte	Resu	t Qualifier	RL		Unit		D P	repared	Analyze	ed	Dil Fac
Gasoline Range Organics	<50.	0 U	50.0		mg/Kg	1	07/2	26/22 08:35	07/26/22 1	0:49	1
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.	0 U	50.0		mg/Kg	1	07/2	26/22 08:35	07/26/22 1	0:49	1
C10-C28)											
Oll Range Organics (Over C28-C36)	<50.0	0 U	50.0		mg/Kg	1	07/2	26/22 08:35	07/26/22 1	0:49	1
	м	B MB									
Surrogate		y Qualifier	Limits					Prepared	Analyze	nd.	Dil Fac
1-Chlorooctane		·	70 - 130					26/22 08:35	07/26/22 1		DII Fac
											1
o-Terphenyl	8	3	70 - 130				07/2	26/22 08:35	07/26/22 1	0:49	1
Lab Sample ID: LCS 880-30658	0/ <b>2-</b> A						Client	sample	ID: Lab Co		
Matrix: Solid									Prep Ty		
Analysis Batch: 30649										Batch:	30658
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics			1000	1058		mg/Kg		106	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	1146		mg/Kg		115	70 - 130		
C10-C28)											
	LCS LC	s									
Surrogate	%Recovery Qu		Limits								
1-Chlorooctane	106		70 - 130								
o-Terphenyl	111		70 - 130								
			10-100								
Lab Sample ID: LCSD 880-306	58/3-A					Cli	ent San	nnle ID: I	ab Control	Sampl	le Dun
Matrix: Solid									Prep T	-	
Analysis Batch: 30649										Batch:	
Anarysis Daten. 30043			Spike		LCSD				%Rec	Daten.	RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Analyte					Quaimer						
Gasoline Range Organics			1000	1120		mg/Kg		112	70 - 130	6	20
(GRO)-C6-C10 Diesel Range Organics (Over			1000	1009		mg/Kg		101	70 - 130	13	20
C10-C28)			1000	1003		mg/rtg		101	70 - 150	10	20
010-0207											
	LCSD LC	SD									
Surrogate	%Recovery Qu	alifier	Limits								
1-Chlorooctane	94		70 - 130								
o-Terphenyl	101		70 - 130								
· · ·											
Lab Sample ID: 890-2606-A-1-I	DMS							Client	Sample ID:	Matrix	Spike
Matrix: Solid									· Prep Ty		
Analysis Batch: 30649										Batch:	
Analysis Baton. 00040									i ieh	Buttin.	

Analysis Batch: 30649									Prep	Batch: 30658
	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	1102		mg/Kg		107	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	660.1	F1	mg/Kg		66	70 _ 130	

Job ID: 890-2601-1 SDG: 03E1558056

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Matrix: Solid

#### Method: 8015B NM - D

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Lab ID: 000 0004 4

Client: Ensolum												ID: 890-2	
Project/Site: BEU 5E HAN SOLO 105H											SDG	G: 03E15	158056
lethod: 8015B NM - Diesel Rar	nge Or	rgar	nics (DR	:O) (GC)	) (Cor	ntinue	ed)						
Lab Sample ID: 890-2606-A-1-D MS										Client	Sample ID	): Matrix	Spike
Matrix: Solid												Type: To	
Analysis Batch: 30649											Prep	o Batch:	30658
	MS	мs											
Surrogate %R	ecovery	Qua	lifier	Limits									
1-Chlorooctane	70			70 - 130	-								
o-Terphenyl	70			70 - 130									
Lab Sample ID: 890-2606-A-1-E MSE	)							(	Client S	ample IC	D: Matrix S	pike Du	plicate
Matrix: Solid												Туре: То	-
Analysis Batch: 30649											Prep	Batch:	30658
	Sample	Sam	ple	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qua	lifier	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0			999		1138		mg/Kg		111	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	I	999		702.8		mg/Kg		70	70 - 130	6	20
	MSD	MSE	)										
Surrogate %R	ecovery	Qua	lifier	Limits									
1-Chlorooctane	71			70 - 130	-								
o-Terphenyl	73			70 - 130									
lethod: 300.0 - Anions, Ion Ch Lab Sample ID: MB 880-30245/1-A	romat	ogr	aphy							Client S	Sample ID:		
Matrix: Solid											Prep	Type: S	oluble
Analysis Batch: 30486													
	_		MB										
Analyte Chloride		<5.00	Qualifier		RL 5.00		Unit mg/Kg	~	D F	Prepared	Analy: 07/24/22		Dil Fac
Chiolide		\$3.00	0		5.00		my/κί	9			07/24/22	23.00	1
Lab Sample ID: LCS 880-30245/2-A									Clien	t Sample	e ID: Lab C	ontrol S	ample
Matrix: Solid										- T		Type: S	
Analysis Batch: 30486													
				Spike		LCS	LCS				%Rec		
Analyte				Added			Qualifier	Unit	D	%Rec	Limits		
Chloride				250		264.1		mg/Kg		106	90 - 110		
Lab Sample ID: LCSD 880-30245/3-A	<b>x</b>							Cli	ient Sar	nple ID:	Lab Contro	ol Samp	le Dup
Matrix: Solid											Prep	Type: S	oluble
Analysis Batch: 30486													
				Spike			LCSD				%Rec		RPD
Analyte				Added			Qualifier	Unit	<u>D</u>	%Rec	Limits	RPD	Limit
Chloride				250		265.5		mg/Kg		106	90 - 110	1	20
Lab Sample ID: 890-2598-A-2-B MS										Client	Sample ID	): Matrix	Spike
Materia: Calid										Choin	Dree	Tuner O	aluble

Prep Type: Soluble

Analysis Batch: 30486										
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	148		249	410.1		mg/Kg		105	90 - 110	

Job ID: 890-2601-1

SDG: 03E1558056

## QC Sample Results

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2598-A-2- Matrix: Solid	C MSD					CI	lient Sa	ample IC	): Matrix Sj Prep	pike Dup Type: S		
Analysis Batch: 30486												
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	Ē
Chloride	148		249	410.1		mg/Kg		105	90 - 110	0	20	

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#### **QC Association Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H

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Job ID: 890-2601-1 SDG: 03E1558056

#### **GC VOA**

#### Analysis Batch: 30499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2601-1	PH03	Total/NA	Solid	8021B	30503
390-2601-2	PH03A	Total/NA	Solid	8021B	30503
MB 880-30503/5-A	Method Blank	Total/NA	Solid	8021B	30503
LCS 880-30503/1-A	Lab Control Sample	Total/NA	Solid	8021B	30503
LCSD 880-30503/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30503
890-2631-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	30503
890-2631-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30503

#### Prep Batch: 30503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-2601-1	PH03	Total/NA	Solid	5035	
390-2601-2	PH03A	Total/NA	Solid	5035	
MB 880-30503/5-A	Method Blank	Total/NA	Solid	5035	
_CS 880-30503/1-A	Lab Control Sample	Total/NA	Solid	5035	
_CSD 880-30503/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
390-2631-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
390-2631-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 30616

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2601-1	PH03	Total/NA	Solid	Total BTEX	
890-2601-2	PH03A	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Prep Batch: 30622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2601-1	PH03	Total/NA	Solid	8015NM Prep	
890-2601-1	PH03	Total/NA	Solid	8015NM Prep	
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 30645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2601-1	PH03	Total/NA	Solid	8015B NM	30622
890-2601-1	PH03	Total/NA	Solid	8015B NM	30622
MB 880-30622/1-A	Method Blank	Total/NA	Solid	8015B NM	30622
LCS 880-30622/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30622
LCSD 880-30622/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30622
880-17280-A-18-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30622
880-17280-A-18-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30622

#### Analysis Batch: 30649

Lab Sample ID 890-2601-2	Client Sample ID PH03A	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 30658
MB 880-30658/1-A	Method Blank	Total/NA	Solid	8015B NM	30658
LCS 880-30658/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30658
LCSD 880-30658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30658

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#### Job ID: 890-2601-1 SDG: 03E1558056

## GC Semi VOA (Continued)

Client: Ensolum

#### Analysis Batch: 30649 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	30658
890-2606-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30658
rep Batch: 30658					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2601-2	PH03A	Total/NA	Solid	8015NM Prep	
MB 880-30658/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30658/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2606-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2606-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
nalysis Batch: 30757					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2601-1	PH03	Total/NA	Solid	8015 NM	
890-2601-2	PH03A	Total/NA	Solid	8015 NM	
IPLC/IC					

#### HPLC/IC

#### Leach Batch: 30245

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2601-1	PH03	Soluble	Solid	DI Leach	
890-2601-2	PH03A	Soluble	Solid	DI Leach	
MB 880-30245/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2598-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2598-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 30486

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2601-1	PH03	Soluble	Solid	300.0	30245
890-2601-2	PH03A	Soluble	Solid	300.0	30245
MB 880-30245/1-A	Method Blank	Soluble	Solid	300.0	30245
LCS 880-30245/2-A	Lab Control Sample	Soluble	Solid	300.0	30245
LCSD 880-30245/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30245
890-2598-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	30245
890-2598-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30245

5 6

9

Job ID: 890-2601-1 SDG: 03E1558056

#### Lab Sample ID: 890-2601-1 Matrix: Solid

Client Sample ID: PH03 Date Collected: 07/19/22 09:25 Date Received: 07/19/22 15:58

Client: Ensolum

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	30503	07/25/22 08:40	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30499	07/25/22 14:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30616	07/25/22 15:54	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30757	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 17:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30622	07/25/22 16:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30645	07/26/22 17:32	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 02:24	CH	XEN MID

#### **Client Sample ID: PH03A**

Date Collected: 07/19/22 09:30 Date Received: 07/19/22 15:58

#### Lab Sample ID: 890-2601-2

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	30503	07/25/22 08:40	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30499	07/25/22 14:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30616	07/25/22 15:54	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30757	07/27/22 08:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30658	07/26/22 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 19:21	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	30245	07/22/22 12:23	SMC	XEN MID
Soluble	Analysis	300.0		1			30486	07/25/22 02:32	СН	XEN MID

#### Laboratory References:

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

		Accreditation/Co	ertification Summary		
Client: Ensolum Project/Site: BEU 5E HA	AN SOLO 105H			Job ID: 890-2601-1 SDG: 03E1558056	
Laboratory: Eurofin Unless otherwise noted, all an		were covered under each acc	reditation/certification below.		
Authority		Program	Identification Number	Expiration Date	
Texas The following analytes a		NELAP but the laboratory is not certifi	T104704400-22-24 ied by the governing authority. This list ma	06-30-23 ay include analytes for which	5
the agency does not offe	er certification. Prep Method	Matrix	Analyte		
8015 NM Total BTEX		Solid Solid	Total TPH Total BTEX		
					8
					9
					10
					13

Eurofins Carlsbad

.

#### **Method Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2601-1 SDG: 03E1558056

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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Eurofins Carlsbad

#### **Sample Summary**

Client: Ensolum Project/Site: BEU 5E HAN SOLO 105H Job ID: 890-2601-1 SDG: 03E1558056

Depth	Received	Collected	Matrix	Client Sample ID	Lab Sample ID
 1	07/19/22 15:58	07/19/22 09:25	Solid	PH03	890-2601-1
2	07/19/22 15:58	07/19/22 09:30	Solid	PH03A	890-2601-2

.

Environment Testing

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

Chain of Custody

Work Order No:

Incident ID:NAPP2209731445 Program: UST/PST 🗌 PRP 🗍 Brownfields 🗍 RRC 🗍 Superfund 🗍 Reporting: Level II CLevel III PST/UST TRRP C Level IV DI Water: H<sub>2</sub>O Cost Center: 1568871001 HNO<sub>3</sub>: HN NaOH: Na MeOH: Me **Preservative Codes** VaOH+Ascorbic Acid: SAPC Sample Comments Date/Time ď Zn Acetate+NaOH: Zn Z Hg: 1631 / 245.1 / 7470 / 7471 > 0 Va2S2O3: NaSO3 VaHSO4: NABIS Other: ົຮ Work Order Comments H<sub>3</sub>PO<sub>4</sub>: HP Page\_ Cool: Cool H<sub>2</sub>S04: H<sub>2</sub> None: NO HCL: HC ADaPT K Se Ag SiO<sub>2</sub> Na Sr Received by: (Signature) www.xenco.com will be enforced unless previously negotiated Eurofine Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control vice: 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 Deliverables: EDD State of Project: 890-2601 Chain of Custody BRCRA 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U ANALYSIS REQUEST Relinquished by: (Signature) rofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms 0 3104 E. Green Street Carlsbad, NM 88220 LT R × XTO Energy, Inc. 1208) X318 × Garrett Green Date/Time × 2/19/23 (S108) H91 × × СНГОКІDES (EPA: 300.0) × Email: bbelil@ensolum.com # of Cont Pres. -TCLP / SPLP 6010: 8RCRA Parameters Bill to: (if different) Company Name: Comp Grab/ Grab/ Grab/ City, State ZIP: TAT starts the day received by the lab, if received by 4:30pm Yes No Address: 🗌 Rush **Turn Around** 20 Depth PU3 Received by: (Signature) ÷ N J Routine Due Date: Sampled Wet Ice: Corrected Temperature: 945 N/A Temperature Reading: Time ache ala Correction Factor: Thermometer ID: 7/19/2022 7/19/2022 Sampled Yes/No Date BEU 5E HAN SOLO 105H EDDY COUNTY, NM AL C Circle Method(s) and Metal(s) to be analyzed 3122 National parks Hwy Conner Shore 03E1558056 Matrix AN Yes No Carlsbad, NM 88220 Temp Blank: 200.8 / 6020: S Ś Yes No/ Yes No Ensolum, LLC 9898540852 Relinquished by: (Signature) Ben Belill Sample Identification Samples Received Intact: Total 200.7 / 6010 SAMPLE RECEIPT Sample Custody Seats: PH03 PH03A Cooler Custody Seals: Project Manager: Sampler's Name: Project Location: Company Name otal Containers Project Number City, State ZIP: Project Name: Address service. Phone: # Od

tevised Date. 08/25/2020 Rev. 2020

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Job Number: 890-2601-1 SDG Number: 03E1558056

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2601 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 ampered 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	
s the Field Sampler's name present on COC?	True	
here are no discrepancies between the containers received and the COC.	True	
amples are received within Holding Time (excluding tests with immediate Ts)	True	
Sample containers have legible labels.	True	
ontainers are not broken or leaking.	True	
ample collection date/times are provided.	True	
ppropriate sample containers are used.	True	
ample bottles are completely filled.	True	
ample Preservation Verified.	N/A	
here is sufficient vol. for all requested analyses, incl. any requested IS/MSDs	True	

N/A

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

Job Number: 890-2601-1 SDG Number: 03E1558056

List Source: Eurofins Midland

List Creation: 07/21/22 10:51 AM

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2601 List Number: 2 Creator: Rodriguez, Leticia

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

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

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APPENDIX E

**NMOCD** Notifications

From:	Hamlet, Robert, EMNRD
To:	Collins, Melanie
Cc:	Pennington, Shelby G; DelawareSpills /SM; Ben Belill; Aimee Cole; Bratcher, Mike, EMNRD; Nobui, Jennifer,
	EMNRD; Harimon, Jocelyn, EMNRD
Subject:	(Extension Approval) BEU 5E Han Solo 105H (Incident Number NAPP2209731445)
Date:	Wednesday, June 22, 2022 11:11:53 AM
Attachments:	image003.png

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

#### RE: Incident #NAPP2209731445

#### Melanie,

Your request for an extension to **August 21st, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced Environmental Bureau EMNRD - Oil Conservation Division 811 S. First Street | Artesia, NM 88210 575.909.0302 | robert.hamlet@state.nm.us http://www.emnrd.state.nm.us/OCD/



From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Wednesday, June 22, 2022 8:13 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD
<mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>; DelawareSpills /SM
<DelawareSpills@exxonmobil.com>; bbelill@ensolum.com; acole@ensolum.com
Subject: [EXTERNAL] BEU 5E Han Solo 105H (Incident Number NAPP2209731445)

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

All,

#### BEU 5E Han Solo 105H (Incident Number NAPP2209731445)

XTO is requesting an extension for the current deadline of June 22, 2022 for submitting a closure request required in 19.15.29.12.B.(1) NMAC at the BEU 5E Han Solo 105H (Incident Number NAPP2209731445). The release occurred on March 24, 2022, and initial assessment activities have

been completed. Based on the laboratory analytical results, XTO is requesting a 60-day extension until August 21, 2022, to complete delineation and excavation of the impacted soil and submit a closure request.

Thank you,

Melaníe Collins



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

From:	Tacoma Morrissey
To:	Ben Belill; Kalei Jennings
Subject:	FW: XTO - Sampling Notification (week of 7/18/22 - 7/22/22)
Date:	Monday, July 18, 2022 8:59:15 AM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png

See below.



Tacoma Morrissey Senior Geologist 337-257-8307 Ensolum, LLC

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Friday, July 15, 2022 2:22 PM
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM

<DelawareSpills@exxonmobil.com>

Subject: XTO - Sampling Notification (week of 7/18/22 - 7/22/22)

#### [ \*\*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 <u>Garrett.Green@ExxonMobil.com</u>

XTO Energy, Inc. 3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729



# APPENDIX F

Safety Data Sheet for Friction Reducer

Released to Imaging: 11/23/2022 1:52:32 PM

Issuing Date 01-Aug-2019	Revision Date 01-Aug-2019	Revision Number
1. IDENTIFIC	ATION OF THE SUBSTANCE/PREPAR COMPANY/UNDERTAKING	ATION AND OF THE
Product identifier		
Product Name	POLYglide Xcel-200	
Other means of identification		
Product Code(s)	10497	
Synonyms	None	
Recommended use of the chen	ical and restrictions on use	
Recommended Use	No information available	
Uses advised against	No information available	
Details of the supplier of the sa	fety data sheet	
Supplier Address PfP Industries 29738 Goynes Rd. Katy, TX 77493	Manufacturer Address PfP Industries 29738 Goynes Rd. 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 haza	rdous by the 2012 OSHA Hazard Communication Stan	idard (29 CFR 1910.1200)
Flammable liquids		Category 4

#### Label elements

# Warning Combustible liquid

EN / AGHS

Revision Date 01-Aug-2019

Appearance	Onaque	Physical state Liquid	Odor Mineral Oil
Appearance	Opaque	Flysical state Liquid	

#### 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	1

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES Description of first aid measures		
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye 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 effect	cts, both acute and delayed	
Symptoms	No information available.	
Indication of any immediate medica	attention and special treatment needed	
Note to physicians	Treat symptomatically.	

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 Impac Sensitivity to Static Discharge		
Sensitivity to Static Discharge	None.	
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 e	guipment 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 containm	ent and cleaning up	
Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike fa 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, includ	ing 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.	

Revision Date 01-Aug-2019

8. EXP	OSURE 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 Eyewash stations Ventilation systems.
Individual protection measures, su	ich as personal protective equipment
Eye/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.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should no 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

# Int Ph Ap Co

Physical state	Liquid	
Appearance	Opaque	
Color	Milky white to yellow	
Odor	Mineral Oil	
Odor threshold	No information available	
Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range Flash point	No data available >= 67 °C / 153 °F	None known
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 - 1.03	
Water 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	

Revision Date 01-Aug-2019

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.
	the second se

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.

EN / AGHS

No information available.
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 degrad	ability No informat	ion available.		
Bioaccumulation	There is no	data for this product.		
Other adverse effects		ion available.		
1	13. DIS	POSAL CONSIDERA	TIONS	
Waste treatment method	ds			
Waste from residues/un products		n accordance with local regul tal legislation.	ations. Dispose of was	te in accordance with
Contaminated packaging	g Do not reus	e empty containers.		
	14. TR	ANSPORT INFORMA	TION	
DOT	Not regulate	ed. Product does not sustain o	combustion (49 CFR 1	73.120(b)(3))
	15. RE	GULATORY INFORM	ATION	
International Inventories				
TSCA	Complies			
DSL/NDSL	Complies			
EINECS/ELINCS	Complies			
ENCS	Does not co	mply		
IECSC	Complies			
KECL	Complies			
in a rene				2000
EN / AGHS				Page 6/

and the second of

Revision Date 01-Aug-2019

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#### 10497 - POLYglide Xcel-200

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.

3	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

Revision Date 01-Aug-2019

#### 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

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End of Safety Data Sheet

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

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	135888
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By Condition

We have received your closure report and final C-141 for Incident #NAPP2209731445 BEU 5E HAN SOLO 105H, thank you. This closure is approved. rhamlet 11/23/2022

CONDITIONS

Action 135888

Condition Date