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

State of New Mexico Energy Minerals and Natural Resources Department

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

Incident ID	NAPP2217931599
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

The Energy				5380		
Contact Name Garrett Green C		Contact Te	Contact Telephone 575-200-0729			
Contact email garrett.green@exxonmobil.com		Incident #	(assigned by OCD)			
Contact mail	ing address	3104 E. Greene Str	eet, Carlsbad, Nev	w Mexico, 88220		
			Location	of Release So	nurca	
22.0	22641		Location	of ixclease Se		
Latitude	33641			Longitude _	-103.83180	
			(NAD 83 in dec	imal degrees to 5 decim	ial places)	
Site Name	James Ranc	h Unit 108H		Site Type I	Production Well	I
Date Release	Discovered	06/22/2022		API# (if app	licable)	
TT 1: T	I a .:		I		,	1
Unit Letter	Section	Township	Range	Coun	•	
G	01	23S	30E	Eddy	У	
	Materia	Federal Tr	Nature and	Volume of I		volumes provided below)
Crude Oil	1	Volume Release	d (bbls) 1.59		Volume Reco	vered (bbls) .09
× Produced	Water	Volume Release	d (bbls) 7.26		Volume Reco	vered (bbls) .41
			ion of total dissolv water >10,000 mg/		☐ Yes 🗶 N	0
Condensa	Condensate Volume Released (bbls)			Volume Reco	vered (bbls)	
Natural G	ias	Volume Release	d (Mcf)		Volume Reco	vered (Mcf)
Other (de	scribe)	Volume/Weight	Released (provide	units)	Volume/Weig	tht Recovered (provide units)
Cause of Rel	ease Externa contrac	l corrosion caused tor has been retain	a flowline to releated for remediation	ase fluids to soil. A purposes.	I A vacuum truck	recovered all free fluids. A third-party

Zoho Sign Document ID: 316041E4-RNMXOSMMJXORZCYPRGJZH415ZK-GPWWD_EG41XVJTWM Received by OCD: 10/25/2023 3:55:2/ PM

Page 2 of 452

Page 2

Oil Conservation Division

	1 480 200 1
Incident ID	NAPP2217931599
District RP	
Facility ID	
Application ID	

*** d ! !	TICLIEG C 1 () 1 1	
Was this a major	If YES, for what reason(s) does the responsi	ble party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	N/A	
19.13.29.7(11) 14141110.		
☐ Yes 🗶 No		
If VES was immediate n	Leading given to the OCD? By whom? To who	m? When and by what means (phone, email, etc)?
N/A	once given to the OCD. By whom: To who	ii: When and by what means (phone, chian, etc):
IN/A		
	Initial Res	sponse
Tl i. 1 -		
i ne responsible	party must undertake the following actions immediately i	unless they could create a safety hazard that would result in injury
★ The source of the relationship	ease has been stopped.	
The impacted area ha	as been secured to protect human health and the	e environment.
Released materials ha	ave been contained via the use of berms or dik	tes, absorbent pads, or other containment devices.
➤ All free liquids and re	recoverable materials have been removed and	managed appropriately.
If all the actions describe	ed above have <u>not</u> been undertaken, explain wh	
NA		•
		nediation immediately after discovery of a release. If remediation
O 1 1		forts have been successfully completed or if the release occurred
		ase attach all information needed for closure evaluation.
		st of my knowledge and understand that pursuant to OCD rules and
		rations and perform corrective actions for releases which may endanger D does not relieve the operator of liability should their operations have
failed to adequately investig	gate and remediate contamination that pose a threat	to groundwater, surface water, human health or the environment. In
addition, OCD acceptance o and/or regulations.	of a C-141 report does not relieve the operator of re-	sponsibility for compliance with any other federal, state, or local laws
C		COVER OF THE CO
Printed Name: Garrett G	reen	Title: SSHE Coordinator
Signature:	A Sun	Date:
email: garrett.green@exx	xonmobil.com	Telephone: 575-200-0729
ынан. <u></u>		receptione.
OCD Only		
OCD Only		
Received by:	Harimon	Date: 06/28/2022

OSMMUXORZCYPRGJZH415ZK-GPWWD_EG41XVJTWM

Page 3

Oil Conservation Division

	Page 3 of 4
ncident ID	NAPP2217931599
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release?	> 100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	X Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas not on an exploration, development, production, or storage site?	X Yes ☐ No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wel	ls.

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 ½-mile of the lateral extents of the release
Boring or excavation logs
Photographs including date and GIS information
Topographic/Aerial maps
Laboratory data including chain of custody

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

Zoho Sign Document ID: 316041F4-RNMXOSMMJXORZCYPRGJZH415ZK-GPWWD_EG41XVJTWM Received by OCD: 10/25/2023 3:55:27 PM State of New Mexico

Page 4

Oil Conservation Division

	Page 4 of 4
Incident ID	NAPP2217931599
District RP	
Facility ID	
Application ID	

regulations all operators are required to report and/or file certain public health or the environment. The acceptance of a C-141 rep failed to adequately investigate and remediate contamination that	release notifications and perform corrective actions for releases which may endanger port by the OCD does not relieve the operator of liability should their operations have a pose a threat to groundwater, surface water, human health or the environment. In operator of responsibility for compliance with any other federal, state, or local laws
Printed Name: _Garrett Green	Title: _Environmental Coordinator
Signature: Satt Sur	Date:12/19/2022
email: _garrett.green@exxonmobil.com	Telephone:575-200-0729
OCD Only	
Received by:Jocelyn Harimon	Date:12/19/2022

Zoho Sign Document ID: 316041F4-RNMXOSMMJXORZCYPRGJZH415ZK-GPWWD_EG41XVJTWM Received by OCD: 10/25/2023 3:55:2/ PM State of New Mexico

Page 5 of 452

Page 5

Oil Conservation Division

Incident ID NAPP2217931599

District RP
Facility ID
Application ID

Remediation Plan

Remediation Plan Checklist: Each of the following items must b	o included in the plan
Remediation I fan Checknist. Luch of the following tiems musi v	e included in the plan.
■ Detailed description of proposed remediation technique	
Scaled sitemap with GPS coordinates showing delineation poin	ts
Estimated volume of material to be remediated	
Closure criteria is to Table 1 specifications subject to 19.15.29.	12(C)(4) NMAC
Proposed schedule for remediation (note if remediation plan times)	
_ ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	• • • • • • • • • • • • • • • • • • • •
<u>Deferral Requests Only</u> : Each of the following items must be con	nfirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around po	roduction equipment where remediation could cause a major facility
deconstruction.	roduction equipment where remediation could cause a major facinity
deconstruction.	
Extents of contamination must be fully delineated.	
·	
Contamination does not cause an imminent risk to human health	n, the environment, or groundwater.
I hereby certify that the information given above is true and comple	te to the best of my knowledge and understand that pursuant to OCD
	certain release notifications and perform corrective actions for releases
which may endanger public health or the environment. The accepta	
liability should their operations have failed to adequately investigate	e and remediate contamination that pose a threat to groundwater.
surface water, human health or the environment. In addition, OCD	
responsibility for compliance with any other federal, state, or local l	
	•
Printed Name: Garrett Green	Title: Environmental Coordinator
P A P	10/10/2022
Signature:	Date:12/19/2022
	575 200 0720
email:garrett.green@exxonmobil.com	Telephone:575-200-0729
OCD Only	
<u></u>	
Received by:Jocelyn Harimon	Date:12/19/2022
Approved	Approval Denied Deferral Approved
	_
Signature:	Date:

Zoho Sign Document ID: 316041F4-RNMXOSMMJXORZCYPRGJZH415ZK-GPWWD_EG41XVJTWM Received by OCD: 10/25/2023 3:55:2/ PM State of New Mexico

Page 6 of 452

Page 5

Oil Conservation Division

	1 480 0 0 7
ncident ID	NAPP2217931599
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: Each of the following items must be included in the plan.
 ☑ Detailed description of proposed remediation technique ☑ Scaled sitemap with GPS coordinates showing delineation points ☑ Estimated volume of material to be remediated ☑ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC ☑ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)
<u>Deferral Requests Only</u> : Each of the following items must be confirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
☐ Extents of contamination must be fully delineated.
Contamination does not cause an imminent risk to human health, the environment, or groundwater.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: Garrett Green Title: Environmental Coordinator
Signature: Date:
email:garrett.green@exxonmobil.com Telephone:575-200-0729
OCD Only
Received by:Jocelyn Harimon Date:12/19/2022
☐ Approved ☐ Approved ☐ Deferral Approved ☐ Deferral Approved
Signature: Robert Hamlet Date: 4/28/2023

6041F4-RNMXOSMMJXORZCYPRGJZH415ZK-GPWWD_EG41XVJTWM 25/2023 3:55:27 State of New Mexico

Page 6

Oil Conservation Division

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

	I uge / Uj 4
Incident ID	NAPP2217931599
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.

A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC	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 certain may endanger public health or the environment. The acceptance of	nediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in PCD when reclamation and re-vegetation are complete. Title:
email: garrett.green@exxonmobil.com	Telephone: <u>575-200-0729</u>
OCD Only	
Received by:	Date:
	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: Scott Rodgers Printed Name:	Date: Date: Date: Environmental Specialist Adv.
_	



APPENDIX D

NMOCD Notifications

From: Hamlet, Robert, EMNRD

To: Collins, Melanie

Cc: Ben Belill; Green, Garrett J; DelawareSpills /SM; Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD

Subject: (Extension Approval) - XTO - James Ranch Unit 108H - Incident Number nAPP2217931599

Date: Wednesday, July 26, 2023 3:24:05 PM

Attachments: <u>image003.png</u>

[**EXTERNAL EMAIL**]

RE: Incident #NAPP2217931599

Melanie,

Your request for an extension to **October 25th, 2023** 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
506 W. Texas Ave.| 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, July 26, 2023 11:31 AM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>;

Harimon, Jocelyn, EMNRD < Jocelyn. Harimon@emnrd.nm.gov>

Cc: bbelill@ensolum.com; Green, Garrett J <garrett.green@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>

Subject: [EXTERNAL] XTO - Extension Request - James Ranch Unit 108H - Incident Number nAPP2217931599

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

All,

XTO is requesting an extension for the current deadline of July 27, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the James Ranch Unit 108H (Incident Number nAPP2217931599). Initial site assessment and delineation activities

have been completed and were documented in a Remediation Work Plan, approved by NMOCD on April 28, 2023. XTO requires BLM approval to access the work area to excavate the impacted soil and investigate the Site for naturally occurring chlorides, as proposed in the approved Remediation Work Plan. A Sundry Form requesting access was submitted to the BLM on May 16, 2023, and in response, BLM requested a botany survey of the work area. A botany survey was completed on July 21, 2023, and the results of the survey are pending. To review the results of the botany survey, excavate impacted soil, investigate for naturally occurring chlorides, review laboratory analytical results, and submit a remediation work plan or closure report, XTO requests an extension until October 25, 2023.

Thank you,

Melanie Collins

TO

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: Hamlet, Robert, EMNRD

To: Collins, Melanie

Cc: DelawareSpills /SM; Green, Garrett J; Ben Belill; Ashley Ager; Tacoma Morrissey; Kalei Jennings; Bratcher,

Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD

Subject: (Extension Approval) - James Ranch Unit 108H - Incident Number NAPP221793159

Date: Monday, September 19, 2022 3:21:36 PM

Attachments: <u>image003.png</u>

[**EXTERNAL EMAIL**]

RE: Incident #NAPP2217931599

Melanie,

Your request for an extension to **December 19th, 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
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us



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

Sent: Monday, September 19, 2022 12:04 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; mike.bratcher@state.nm.us; Hamlet,

Robert, EMNRD < Robert. Hamlet@state.nm.us>

Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Green, Garrett J

<garrett.green@exxonmobil.com>; bbelill@ensolum.com; Ashley Ager <aager@ensolum.com>;

Tacoma Morrissey <tmorrissey@ensolum.com>; Kalei Jennings <kjennings@ensolum.com>

Subject: [EXTERNAL] XTO - Extension Request - James Ranch Unit 108H - Incident Number

NAPP2217931599

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

All,

XTO – Extension Request – James Ranch Unit 108H – Incident Number nAPP2217931599

XTO is requesting an extension for the current deadline of September 20, 2022 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the James Ranch

Unit 108H (Incident Number NAPP2217931599). The release occurred on June 22, 2022, and initial site assessment activities were completed July 26, 2022. Additional delineation activities were completed last week and are pending laboratory analytical results. In order to review the laboratory analytical results, discuss remedial options, and submit a remediation work plan or closure report, XTO requests an extension until December 19, 2022.

Thank you,

Melanie Collins

ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

Ben Belill

From: Tacoma Morrissey

Sent: Wednesday, December 14, 2022 1:49 PM

To: Ben Belill

Subject: FW: XTO - Sampling Notification (Week of 10/17/22 - 10/21/22)

See below!



From: Green, Garrett J <garrett.green@exxonmobil.com>

Sent: Monday, October 17, 2022 11:21 AM

To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>

Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>

Subject: XTO - Sampling Notification (Week of 10/17/22 - 10/21/22)

[**EXTERNAL EMAIL**]

All,

Please see the update below to this week's sampling schedule. XTO plans to complete final sampling activities at the following sites the week of Oct 17, 2022.

Monday

BEU 29W Vader 100H / nAPP2102831345

Tuesday

- BEU 29W Vader 100H / nAPP2102831345
- PLU 21 BD 125H/ nAPP2214547737

Wednesday

- BEU 29W Vader 100H / nAPP2102831345
- PLU 30 Big Sinks/ nAPP2209137379, nAPP2208351954, nAPP2206853301

Thursday

- PLU 30 Big Sinks/ nAPP2209137379, nAPP2208351954, nAPP2206853301
- JRU 108 / nAPP2217931599
- JRU 106 / nAPP2212344322

Garrett Green

Environmental Coordinator Delaware Business Unit

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>

Sent: Thursday, August 31, 2023 10:01 AM

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

Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD

<Robert.Hamlet@emnrd.nm.gov>

Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

External Email - Think Before You Click

Hi Melanie,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced Environmental Bureau EMNRD-Oil Conservation Division 1220 S. St. Francis Drive | Santa Fe, NM 87505 (505)469-7520 | Shelly. Wells@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/

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

Sent: Thursday, August 31, 2023 8:49 AM

To: Enviro, OCD, EMNRD < OCD.Enviro@emnrd.nm.gov>; spills@slo.state.nm.us
Cc: bbelill@ensolum.com; Green, Garrett J < garrett.green@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

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

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 5, 2023.

Tuesday

• PLU 18 TWR Sat Battery / nAPP2230551957

Wednesday

- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 19 Tank Battery / NAPP2322348507 (SLO)

Thursday

- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 2 702H / nAPP2211654411
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Friday

- PLU 18 TWR Sat Battery / nAPP2230551957
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Thank you,

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: <u>Collins, Melanie</u>

To: <u>ocd.enviro (ocd.enviro@emnrd.nm.gov)</u>

Cc: <u>Green, Garrett J</u>; <u>Ben Belill</u>

Subject: XTO - Sampling Notification (Week of 9/11/23 - 9/15/23)

Date: Wednesday, September 6, 2023 2:39:22 PM

Attachments: <u>image001.png</u>

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 11, 2023.

Monday

- JRU 108 / nAPP2217931599
- BEU 70 / NAPP2318139530

Tuesday

• JRU 108 / nAPP2217931599

Wednesday

• JRU 108 / nAPP2217931599

Thursday

- JRU 108 / nAPP2217931599
- PLU 29 Big Sinks West CTB / NAPP2320634792

Friday

• PLU 29 Big Sinks West CTB / NAPP2320634792

Thank you,

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756



APPENDIX E

Remediation Work Plan December 19, 2022



December 19, 2022

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

Re: Remediation Work Plan

James Ranch Unit 108H

Incident Number nAPP2217931599

Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Remediation Work Plan* (*Work Plan*) to address impacted soil at the James Ranch Unit 108H (Site). Soil was impacted due to a release of crude oil and produced water. Based on delineation activities and laboratory analytical results, XTO is submitting this *Work Plan* describing remediation actions completed to date and proposing to investigate naturally occurring chloride concentrations within the shallow caliche formation identified in the area.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 1, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.33641°N, 103.83180°W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 22, 2022, corrosion on a flowline resulted in the release of 7.26 barrels (bbls) of produced water and 1.59 bbls of crude oil into the pasture underneath active surface flowlines. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 0.41 bbls of produced water and 0.09 bbls of crude oil were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on June 27, 2022. The release was assigned Incident Number nAPP2217931599.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to determine applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On June 4, 2019, a soil boring (C-4325) was drilled within a ½-mile east of the Site. Soil boring C-4325 was drilled to a depth of 150 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activites. The borehole was left open for over 72 hours to

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 3122 National Parks Highway | Carlsbad, NM 88220 | ensolum.com

XTO Energy, Inc Remediation Work Plan James Ranch Unit 108H

allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 150 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. Shallower soil borings permitted by the NMOSE, C-03559 point of diversion (POD)-1 through POD -4, were drilled and plugged just south of the release in 2012. The deepest soil boring, POD-1, was drilled to 50 feet bgs and no groundwater was encountered in any of the shallow soil borings. All wells used to determing depth to groundwater are depicted on Figure 1 and the Well Record and Log for each well is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 3,919 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is underlain by unstable geology (high potential karst designation area).

Based on the existence of high potential karst underlying the Site, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

DELINEATION SOIL SAMPLING ACTIVITIES

On July 26, 2022, Ensolum personnel completed a Site assessment to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven delineation soil samples (SS01 through SS07) were collected within and around the release extent from a depth of approximately 0.5 feet bgs. Delineation soil samples SS01 through SS03 were collected within the release extent, and samples SS04 through SS07 were collected around the release extent to confirm the lateral exent. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site assessment and a photographic log 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 under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they are collected may not have equilibrated to the 6 degrees Celcius required for shippment and long term storage, but are considered to have been received in acceptable condition.



XTO Energy, Inc Remediation Work Plan James Ranch Unit 108H

Two potholes (PH01 and PH02) and one borehole (BH03) were advanced by use of heavy equipment and hand auger. Potholes PH01 and PH02 were advanced to a depth of approximately 7 feet bgs and were collected in the vicinity of delineation soil samples SS01 and SS02, respectively. Discrete delineation soil samples were collected from each pothole at depths ranging from 2 feet bgs to 7 feet bgs. Borehole BH03 was advanced in the vicinity of delineation soil sample SS03 to a depth of approximately 1-foot bgs until auger refusal. A sample was collected a depth of 1-foot bgs. Soil from each pothole and borehole was field screened and handled as described above. Field screening results and observations for the potholes and borehole were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil sample locations are depicted on Figure 2.

Ensolum observed a caliche formation in PH01 and PH02 between 3 and 7 feet bgs exhibiting elevated (greater than 3,000 mg/kg) chloride field screening results. As such, Ensolum advanced one pothole (BG01) to evaluate naturally occuring chloride concentrations outside of the release extent and in an area that does not appear to have been disturbed by oil and gas operations. Pothole BG01 was completed approximately 60 feet northeast of the edge of the release extent and was advanced to a depth of 6 feet bgs. Discrete soil samples were collected at depths of 0.5 feet bgs in a poorly graded sand, and 4 feet bgs and 6 feet bgs in the underlying caliche formation. Field screening results and observations for the pothole was logged on lithologic/soil sampling logs, which are included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicate TPH concentrations exceeded 100 mg/kg in samples collected within the release footprint from 0.5 to 4 feet bgs in SS01/PH01 and at the ground surface at SS02 and SS03. Similarly, chloride concentrations exceeded 600 mg/kg within the release footprint in samples from the ground surface in SS01, SS02, and SS03 and at depth in PH01 and PH02. Chloride concentrations detected at depth were variable, ranging from 3,160 mg/kg to 26,700 mg/kg. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix D.

Laboratory analytical results for soil samples from BG01 collected from the underlying caliche formation at 4 feet bgs, and 6 feet bgs, indicated chloride concentrations were within range of those detected in the subsurface in similar lithology within the release footprint.

PROPOSED REMEDIATION WORK PLAN

Based on the presence of elevated TPH concentrations in soil within the release footprint, XTO proposes to excavate soil containing TPH exceeding 100 mg/kg. Based on field screening and laboratory analytical results, the excavation will proceed to approximately 4 feet bgs. Following removal of the soil, Ensolum personnel will collect five-point confirmation soil samples representing at most every 200 square feet of the excavation floor and sidewalls. The soil samples will be handled as described above and delivered to Eurofins for analysis of BTEX, TPH, and chloride.

Based on the laboratory analytical results for chloride concentrations in samples collected from BG01, PH01, and PH02, Ensolum suggests there is potential for naturally occuring elevated chloride in the underlying caliche formation, which may demonstrate a shallowing westerly trend based on auger refusal in BH03 and lessening visible vegetation in the same direction. To evaluate naturally occurring chloride in the identified caliche formation, XTO will advance four additional background potholes (BG02 through BG05) in undisturbed pasture areas located approximately 180 feet to 280 feet from the edge of the release extent in multiple directions. The locations proposed are as close as possible to the



XTO Energy, Inc Remediation Work Plan James Ranch Unit 108H

release but outside of disturbed areas. Soil samples will be collected from each pothole at 1-foot intervals and include both the caliche formation and overlying sand. The soil samples will be field screened for chloride and advanced until chloride concentrations are less than 600 mg/kg or enough representative samples of the caliche have been collected to document naturally occurring conditions. The delineation soil samples will be handled as described above and analyzed at the laboratory for chloride.

Following excavation of TPH-impacted soil within the release footprint and completion of background sampling, XTO will submit a report requesting closure based on removal of impacted soil or a revised work plan to address any remaining chloride in soil exceeding background concentrations. XTO will complete the proposed remediation activities within 90 days of the date of approval of this *Work Plan*.

XTO believes the scope of work described above is equally protective of human health, the environment, and groundwater. As such, XTO respectfully requests approval of the *Work Plan* from NMOCD.

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

Sincerely, **Ensolum, LLC**

Benjamin J. Belill Project Geologist

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

ashley L. ager

cc: Garrett Green, XTO

Shelby Pennington, XTO Bureau of Land Management

Appendices:

Figure 1 Site Receptor Map

Figure 2 Delineation Soil Sample Locations Table 1 Soil Sample Analytical Results

Appendix A Referenced Well Record

Appendix B Photographic Log

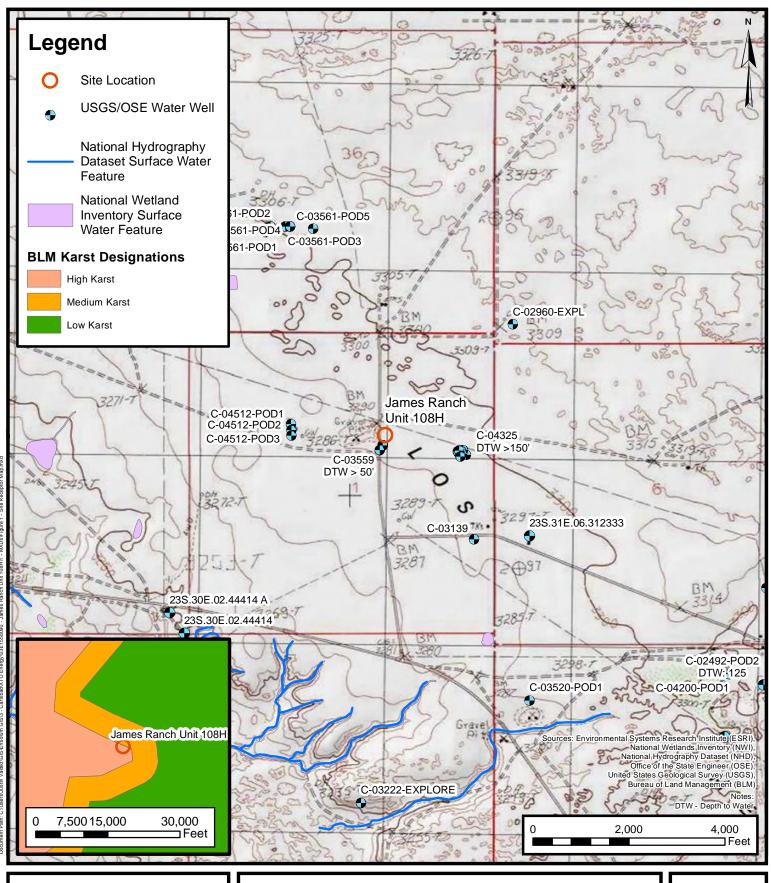
Appendix C Lithologic / Soil Sampling Logs

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

Appendix E NMOCD Notifications



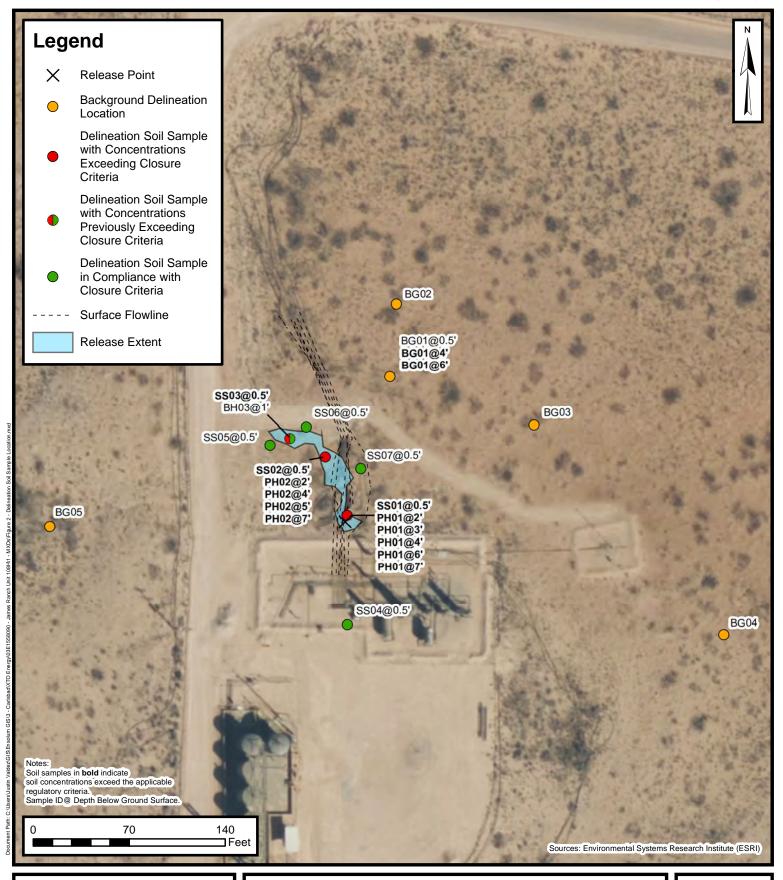
FIGURES





Site Receptor Map

James Ranch Unit 108H XTO Energy, Inc Unit G Sec 1 T23S R30E Eddy County, New Mexico Incident Number: nAPP2217931599 FIGURE





Delineation Soil Sample Locations

James Ranch Unit 108H XTO Energy, Inc Unit G Sec 1 T23S R30E Eddy County, New Mexico

Incident Number: nAPP2217931599

FIGURE



TABLES



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS JRU 108H 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	NE	100	600
				Del	ineation Soil San	nples				
SS01	07/26/2022	0.5	1.05	41.5	2,140	16,300	4,760	18,440	23,200	4,930
PH01	10/20/2022	2	<0.0498	2.40	935	3,250	2,180	4,190	6,370	2,870
PH01	10/20/2022	3	< 0.0497	32.6	848	1,970	1,190	2,820	4,010	12,300
PH01	10/20/2022	4	< 0.0499	27.1	531	1,340	824	1,876	2,700	3,160
PH01	10/20/2022	6	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	26,700
PH01	10/20/2022	7	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	4,100
SS02	07/26/2022	0.5	<0.0499	1.98	1,050	9,700	1,720	10,750	12,500	1,650
PH02	10/20/2022	2	<0.00201	<0.00402	<49.9	63.5	<49.9	63.5	63.5	13,600
PH02	10/20/2022	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	22,100
PH02	10/20/2022	5	< 0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	6,400
PH02	10/20/2022	7	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	5,550
SS03	07/26/2022	0.5	<0.0497	13.3	188	9,420	1,960	9,608	12,400	9,420
BH03	09/08/2022	1	< 0.00199	<0.00398	<49.9	<49.9	75.6	<49.9	75.6	54.1
BG01	10/20/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	10.4
BG01	10/20/2022	4	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	4,860
BG01	10/20/2022	6	0.00216	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	4,650
SS04	07/26/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	131
SS05	07/26/2022	0.5	<0.00199	<0.00398	<49.8	<49.8	62.8	<49.8	62.8	13.6
SS06	07/26/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	10.9
SS07	07/26/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	8.7

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Ensolum 1 of 1



APPENDIX A

Referenced Well Records

LI Emiror			Ca	508 West dsbad, N					Identifier 4325 (MW Project Name: JRU 10	O I) Date 5/22/19 RP Number 2RP-3-104, 2RP-3464, 2RP-3179
		LITHO	LOGIC			LING LO			Logged By: BEN BELILL	Method Lan C
Lat Long.	3353	39, 103.	827	697		ning CHLO and MRO	ORIDES, TE D		Hole Diameter 6.15"	Total Depth: 150'
				0% error fa						
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholog	y/Remarks
0	(uz	0.5	N	lwal	0]	 - - - -	(SP-SM)	5;14; grad	15AND, dry, b	bentied, poorly
D	2112	0.4	7	A ICWIN	2	z'				
٨	(u2	١. ن	Ч	Awals	3	3′			V	
D	412	0.3	٨	MUDIC C	1	9	¿MICHÉ	0117	CHE w/ Sund, a	day, It bon/ for ton, red sond, nooder
₽	Ku2	0.1	W	avi D	5	5'		•		
n	hiz	0.5	4	MW (E	6	ر ا ا				
0	6112	0.4	h	MUSI F	7 _	7'				
D	Kuz	0.3	۲	mwiG	8 _	<i>\$</i> ′			V	
0	403	0.[7	HICAW		G	SP	5.A.		dy, It bra/bin,
D	345	o.g	Ŋ	Mai I	10	12'		54	A	1,000
D	345	3,1	N	MW (5	11	N T	5P-SM)	Silty	strot, chy b	1 saty poly gradel,
				my tK	-15	12-	↓	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	m., no odel.	<u> </u>

D <112 D <112 D <112 D <112	LILA (midd)	DLOG	IC / SO	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type Type	JRU 10 Logged By: FEX, Hole Diame		ZRP-3243 Method Total Depth: //Remarks
Comment All Ch Woisture Content Cont	LILA (midd)	Staining N	A John Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type Type	FEX, Hole Diame	ter.	Total Depth:
Comment All Ch Woisture Content Cont	Notation (ppm)	Staining Staining	A John	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	(ab)		
D <117 D <117 D <117 D <117 D <117	4.8	N N N N N N N N N N N N N N N N N N N	WASIN	(ft. bgs.)	Depth 12'		TA	Lithology	/Remarks
D <112 D <112 D <112 D <112	3.8 4.9 4.8	2 2	WAS! V	13 .	13'		MA.		
D <112 D <112 D <112 D <112	3.8 4.9 4.8	N	mwol n	14 .	191				
D C112 D C112 D C112	4.8	N	MWOIN						
0 Kuz				15	15'				
D <117	1.1	N	MWOID	100					
P (In				16	16"				
	0	N	MWIP	17	17'				
	4,1	N	MUOIC	18	18'	ML S		benlind,	na plastic, no
0 417	6.5	N	MUJR	19	19'		o do /		
1) (180	1,3	Ν	mwo15	20	20'				
0 (14	09.2	٧	MWOJT	21	71'				
D (112	7.4	N	MUSTU	22	71'				
0 (112	5,1	٨	mulo (V	23	23'				

Athyri	Panmental, Inc.			LT Envi 508 Wes Carlsbad, N mpliance · E	t Steven lew Mex	s Street ico 8822		Date: Date: S / 2 7 / 4
- 1. A -		LITI	HOLO	GIC /SO				Logged By: BEN BELILL Method PH, BTEX, Hole Diameter Total Depth:
at/Long		loride test	include	a 60% error f	GRO, MR	O, and DRO		in the Diameter
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #		Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	6.5	M	M John	24	74	ML	544
Ð	Cur	4.6	N	Muol X	25	25'		
p	(in	5.1	N	wol A	26	26'		
D	LIZ	9.4	N	MWOI Z	27	27'		
0	£112	0.8	N	onus I AA	28	25		
D	2112		N			29		
- 1	- 1			mws IAC		70		
				MUDIAD	-	31		
				MUOI AE	-	4 1		
				MWOIAF	1			
				MW0/46	‡	-		
4	1120	. 0	\checkmark	awoi At	35	35		
					36	*	4	7

Released to Imaging: 3/11/2024 11:17:01 AM

Complaince Engineering Remediation LithoLogic / SOIL BORING LOG Legged by BEN BELILL Method Total Depth GRO, MRO, and DRO. Total Depth Total	LT:	-		Ca	LT Envi 508 Wes rlsbad, N	ronmenta It Stevens New Mexic	al, Inc. Street co 88220			Identifier: MWD Project Name:		Date 5/2 / 4 - 5/2 3/ RP Number 2RP-3464, 2RP-31 2RP-3243
### Total Depth Total Depth	40	is a		Comp	liance E	ngineering	Remedi	ation		JRU 10		ZRP-3243
Comment All Chloride test include a 60% error factor. Comment All Chloride test in	Tana		LITHO	OLOG	IC / SO				BTEX		LL	Children Co.
D (172 1.6) N Novel 45 36 1 76 CL 5.14y CLAY, dry, red/bra, low plaster D (172 1.5) N MOVEL AK 38 1 38 D (172 1.5) N MOVEL AK 38 1 38 D (172 1.4) N MOVEL AC 40 CHT 1.4) N MOVEL AC 42 147 D (172 1.4) N MOVEL AC 43 147 D (172 1.4) N MOVEL AC 44 141 D (172 1.4) N MOVEL AC 44 141 D (172 1.5) N MOVEL AR 45 143 D (172 2.5) N MOVEL AR 45 143 D (172 1.9) N MOVEL AR 45 143 D (172 1.9) N MOVEL AR 45 143		All Chlo	oride test in	clude a 6	50% error f	GRO, MR						
D 2112 6.0 N MODEL AT 37 137 D 2112 6.0 N MODEL AT 38 38 D 2112 6.0 N MODEL AT 39 38 D 2112 6.0 N MODEL AT 40 40 D 2112 6.0 N MODEL AT 40 40 D 2112 1.4 N MODEL AT 42 472 D 2112 7.8 N MODEL AT 43 473 D 2112 7.8 N MODEL AT 43 473 D 2112 7.8 N MODEL AT 45 46 46 D 2112 7.8 N MODEL AT 45 46 46	Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #			Soil/Rock Type		Lith	ology/Ren	narks
D 2112 6.0 N MODEL AT 37 137 D 2112 6.0 N MODEL AT 38 38 D 2112 6.0 N MODEL AT 39 38 D 2112 6.0 N MODEL AT 40 40 D 2112 6.0 N MODEL AT 40 40 D 2112 1.4 N MODEL AT 42 472 D 2112 7.8 N MODEL AT 43 473 D 2112 7.8 N MODEL AT 43 473 D 2112 7.8 N MODEL AT 45 46 46 D 2112 7.8 N MODEL AT 45 46 46	0	(112	0,1	M	Must A	¥36	36	CL	5.144	CLAY, dry.	red/b	ra, low plastical
D 2112 6.0 N mwolfie 40 40 D 2112 6.0 N mwolfie 40 40 D 2112 6.0 N mwolfie 40 40 D 2112 1.4 N mwolfie 43 47 D 2112 7.8 N mwolfie 43 47 D 2112 2.5 N mwolfie 45 45 D 2112 2.5 N mwolfie 45 45 D 2112 2.5 N mwolfie 46 46	0	4112	0.0	N	mue (A	37	37		10	odor.		
D KIIZ 0.0 N MWHA W 41 41 D KIIZ 0.0 N MWHA W 41 41 D KIIZ 1.4 N MWHA W 42 47 D KIIZ 2.8 N MWHA P 43 47 D KIIZ 2.8 N MWHA P 43 47 D KIIZ 2.5 N MWHA AR 45 47 D KIIZ 2.5 N MWHA AR 45 45 D KIIZ 2.5 N MWHA AR 45 46	a	4112	1.5	~	Muo ()	4 × 38	38					
D K112 G-O N MWH W41 41 D K112 G-O N MWH W41 41 D K112 G-O N MWH A0 42 42 D K112 Z-S N MWH A0 44 44 D K112 Z-S N MWH AR 45 45 D K112 Z-S N MWH AR 45 46 D K112 Z-S N MWH AR 45 46	D	2112	6.0	N	mwl	LL 39	35					
D (117 1.4) N mwol Ao 42 477 D (117 7.8) N mwol Ao 43 43 D (117 7.8) N mwol Ao 44 44 D (117 7.8) N mwol AR 45 40 D (117 7.8) N mwol AR 45 46 D (117 7.8) N mwol AR 45 46	D	2112	0.0	N	mwol	4m 40	40					
D 6117 2.5 N MUSI AR 45 40 D 6117 2.5 N MUSI AR 45 40 D 6117 2.5 N MUSI AR 45 40 D 6117 1.9 N MUSI AR 46 46	0	KIIZ	0-0	N	MwolA	W 41	41					
D K117 2.5 N MW AR 45 45 D K117 2.5 N MW AR 45 45 D K117 2.5 N MW AR 45 46	0	ŽIIZ	1.4	W	mwo ()	40 42	42					
D K117 2.5 N MUSI AR 45 45 45 45 45 45 45 46	0	(117	7.8	V	mwa()	4 0 43	43					
0 =1/2 1.9 N MW1(AS 46 = 46	۵	e112	1.8	N	Muol	AQ 44	· yu					
	D	1117	2.5	N	Mub()	AR 45	43					
	0	4/12	1-9	N	MU) ()	AS 46	46					
D KIIZ Z.O N MELAT 47 \$47	0	\112	2.0	N	mus ()	4 T 47	47					

Carlshad, New Mexico 88220 Compliance Engineering Remediation LITHOLOGIC / SOIL BORING L. D. Lat Long Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Depth GRO. MRO. and DRO Comment All Chloride test include a 60% error factor. Lithology/Remarks Lithology/Remarks Lithology/Remarks Lithology/Remarks Lithology/Remarks Color of Chloride test include a 60% error factor. Silfy CLAT w./ CLAT	LT Environme	ental, Inc.			508 Wes	ronmenta st Stevens	Street		I	dentifier MW2	Date: 5/2 3/19	
Field Screening CHLORIDES, TPH, BTEX. Hole Dameter Total Depth GRO, MRO, and DRO GRO, GRO, GRO, GRO, GRO, GRO, GRO, GRO,	25								- 1		RP Number, 2RP-3464, 2 2RP-3243	RP-317
GBO, MRO, and DRO 6.15" Lithology/Remarks			LITHO	OLOG	IC /SO	IL BORI	NG LO	G	1	ogged By: BEN BELILL	Method:	
D (112 1.3) N MADIAN 49 49 49 50 50 50 50 50 50 50 50 50 50 50 50 50		All Chlo	hloride test in	clude a 6	50% error f	GRO, MRC					Total Depth.	
0 (112 1.3) N MADIAN 49 49 49 50 50 50 50 50 50 50 50 50 50 50 50 50	Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #			oil/Rock Type		Litholo	gy/Remarks	
D (112 1.3) N MADIA V 49 44 D (112 1.2) N MADIA V 50 50 D (112 1.2) N MADIA V 51 51 D (112 1.3) N MADIA V 51 51 D (112 1.3) N MADIA V 52 52 D (112 1.5) N MADIA V 52 52 D (112 0.1) N MADIA S 54 54 D (112 0.1) N MADIA S 55 55 D (112 0.1) N MADIA S 56 56 D (112 2.9) N MADIA S 57 57 D (112 2.9) N MADIA S 57 57		72		1320	-	48]	2/8	122	ilty	CUAY, dry, 1	ed/bin, low plast.	city
D (112 1.2 N MADIAN 50 1 50 1 50 1 1 1 1 1 1 1 1 1 1 1 1 1	0	(112	2 1.3	~	MWO A	√ 49	44		:14	CLAT W/ Cal	ine, dry, red/br	سما را
D (112 1.3 N MUDIA) 52 52 D (112 1.3 N MUDIA) 52 52 D (112 1.5 N MUDIA) 52 52 D (112 0.1 N MUDIA) 54 54 D (112 0.1 N MUDIA) 54 54 D (112 0.1 N MUDIA) 56 56 D (112 7.0 N MUDIA) 57 57 D (112 7.9 N MUDIA) 57 57	D	<112	2 1.2	N	Mrs LA	₩ 50 _	50	s	inty	CLAY dry,		
D (112 0.1 A) MADISA 54 54 D (112 0.1 A) MADISA 54 54 D (112 0.1 A) MADISA 55 D (112 7.0 N) MADISC 56 55 D (112 7.0 N) MADISC 56 55 D (112 7.0 N) MADISC 57 57	0	Lin	2 1.2	N	MUDIA	× 51	51		,,,			
D < 112 0.1 AV MADISA 54 - 54 D < 112 0.1 AV MADISA 55 - 55 D < 112 7.0 N MADISC 56 - 56 D < 112 7.0 N MADISC 56 - 51 D < 112 7.9 N MADISD 57 - 57	P	(112	2 1.3	~	MUSICAM	y 52	52					
Q <12 7.0 N Mul &C 56 55 57 D <12 7.0 N Mul &C 56 55 D <12 7.9 N Mul &D 57 57							+1					
D (117 7,0 N MW) BC 56 556 D (117 7,0 N MW) BD 57 57	0	<112	12 0.1	N	moi (5 A 54	54					
D <12 2.9 N MU018 D 57 = 57	Q	<1n	0.3	~	Who	9 55	55			1		
	0	(117	7 7,0	N	mw1	BC 56	Sib					
D -112 38 N MW318 E 58 \$ 58	b	Luz	2.9	Ņ	MWo I (D 57	57					
	- 1						11					
D 4112 2.3 N MYTE F 59 \$59	D	2112	2.3	N	W42] (F 59	54					

Pictor	mental, Inc.		Ca	508 Wes rlsbad, N		al, Inc. Street co 88220		Pr	roject Name:	Date: 5/2 3/19 RP Number: 2RP-3179, 2RP-3464, 2RP-524:
at/Long		LITHO	OLOG	IC /SO		NG LOC	ORIDES, TPH,		ogged By: BEN BELILL	Method: Total Depth:
ommen	at All Chlo	ride test in	clude a 6	0% error f		O, and DRO				
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithol	ogy/Remarks
P	4112	2.8	N	mwo 18	G 60	60	cL	silty	CLAY, dy	bin (md, dow
P	4112	2.9	N	Amol 6	H 61	6,		Olas	tury, ro	edo (
P	KIIZ	7.8	N	mve i 0	1 62	bi				
D	2112	3.4	N	mwal (S	5 63	63				
D	2012	1.6	N	Who!	K64 .	64				
þ	UIZ		1.0	mwal B		L.5				
P	<111L	4.5	Ν	mwol 3	A 66	66				
P	KIIZ	3.7	Ч	mus) (₩ 67	17				
P	< 11Z	1.9	N	MHOIS	d 68	65				
0	Z112	1.)	N	pwols	P 69	14				
D	Cuz	7.3	N	nubiB	Q 70	70				
0	(1.2	1.7	N	mubis	ę 71 <u> </u>	71				
					72	I	1			

LT Environ	mental, Inc.			508 Wes	ronmenta t Stevens New Mexic	Street		Identifier MW9 \	Date 5/23/19
2	51				ngineering			Project Name: JRU 10	RP Number 2RP-3179, 2RP-3464, 2RP-524
		LITH	OLOG	IC /SO	IL BORI	The state of the s		Logged By: BEN BELILL	Method
at/Long		oride test in	clude a	50% error f	GRO, MRC	200	ORIDES, TPH,	BTEX, Hole Diameter	Total Depth
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholo	gy/Remarks
₽	2112	3-1	۲	Muo) (5 72	72	LL	SHA	
þ	Kuz	1,0	N	muoj 1	773	73			
D	<117	1d	~	prisi-1 6	v 74	74			
D	2112	6.0	N	wmol	V75	75			
D	2112	5.6	N	who !	W 76	76			
D	2112	3.4	1	mbole	¥ 77	77			
9	4112	1.1	٨	mwo)	y 78	78			
P	243	1.2	N	mwolf	₹79	74			
D	2117	2.4	N	mol C	A 80	80			
ð	2112	4.7	Ŋ	mws I C	681	81			
D	K112	3.7	N	WHIC	L 82	45			
P	L112	37	N	mws (C	0 83	83			
					84			1	

LT Environ			Ca	508 Wes arlsbad, N	ronmenta t Stevens lew Mexic ingineering	Street co 88220		Identifier: MW0 \ Project Name: JRU 10	Date: 5/23/19 RP Number: 2RP-3179, 2RP-3464, 2RP-524;
		LITHO	DLOG	IC /SO	IL BORI	NG LO	G	Logged By: BEN BELILL	Method
at/Long							ORIDES, TPH, E		Total Depth
Commen	t All Chlo	ride test in	clude a	60% error f	GRO, MRO	O, and DRC).		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholog	gy/Remarks
0	1112	4.9	N	MWO 1 C	E 184	811	CL S	AA	
D	4112	1.5	N	WASI	F 🏲 65_	85		0	
D	<112	J.)	N	MWOLL	G ■ 86	86			
0	2117	7.4	N	mwold	H 4 87	87			
Ú	C112	1,6	N	W IC	1 🖜 88	88			
D	6112	1.1	N	mvo la	J ♥ 81	81			
D	CIIZ	0.9	N	Mwo IC	K @10	40			
þ	<11Z	7.6	N	music	L - 51	41		LA SILY SLAY, dry	
D	4112	3.8			M ■92	41		lasticity, no odor	•
b	<1117	1.4	N	mw>1 C	N - 93	47			
0	1112	1.2	٧	mus) C	0 = 44	44			
D	4112	0.8	J	Was) <	P = 95	95			

LT Environ	mental, Inc.			508 Wes arlsbad, I	ronmenta It Stevens New Mexic Engineering	Street co 88220		Project Name: JRU 10	Date: 5/23/19 RP Number: 2RP-3179, 2RP-3464, 2RP-524
		LITH	OLOG	GIC / SO	IL BOR	NG LO	G	Logged By: BEN BELILL	Method
at/Long					Field Scree		ORIDES, TPH,	BTEX, Hole Diameter	Total Depth:
ommen	t All Chlo	oride test in	clude a	60% error f), and DRC	,		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholog	gy/Remarks
P	1112	1-4	N	MWOL C	Q 🏚 96]	96	CL 3	ilty CLAY brale	red, low plastich,
0	Luz	4.2	N	MWO! C	R • 91	47		1 2461	
0	2112	2.2	J	MWO! C	5 248	98		1	
۵	Luz	1.8	N	MWOLC	1 12	11			
D	ζu²	1,1	N	mwal (U 🌰 100	100'			
0	LUZ	1,5	N	mwo (V 🌰 10	121		ĺ	
D	£1·1	0.4	N	MWOLO	W 📆 192	107			
0	Llin	1,4	N	MWO/C	ו103	123			
D	2112	طدا	N	MWIC	Y⊕101 <u>1</u>	124			
P	6112	0,7	N	Mrocc	Z 🛡 105	105			
	2112	1.3	N	who()	A \$106	126			
	1112	0.6	٦	wwell)	50107	107			
				6	00000E		× 7		

Released to Imaging: 3/11/2024 11:17:01 AM

LT Environ			Ca	508 Wes rlsbad, N	rironmental, Inc. st Stevens Street New Mexico 88220 Engineering Remediation				Project Name: JRU 10	Date: 5 /23 / 9 /5/1/2012 RP Number: 2RP-3179, 2RP-3464, 2RP-5243
	LITHOLOGIC / SOIL BORING LOG at/Long: Field Screening: CHLO								Logged By BEN BELILL	Method
at/Long	9				The second second	o, and DRC		PH, BTEX,	Hole Diameter.	Total Depth:
Commen	t All Chlo	ride test in	clude a 6	0% error f	actor.	-		2.		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Lithol	logy/Remarks
D	2112	1.3	N	are iD	C72108	168	CL	SAA		
D	KIIZ	0.3	N	Mue (D	ŋ 73 (d	101		1		
D	LIIZ	0,6	1	nwal (E74 lie	110	Y .			
D	<1112	0.6	N	mus (f)	F75 II	hi				
D	1117	0,5	N	muci ()6 76 ki	2 112				
D	<112	3.5	N	muloip	14 77 (t	3 113				
P	KIIZ	5.3	N	Mulio	578 HC	1114				
D	K112	1.3	N	mwo C	5 79	IIIS				
0	<112	3.3	N	nwo P	₹80	116				
D	<112	7.9	N	mue (D	L81	117				
D	(112	3,3	N	MV01 ()^\ 82	118				
)	LIIL	4.8	4	MVOID	N 83	111				
					84	#	J	1		

LT Environm	nental, Inc.		C	508 Wes	ronment	al, Inc. Street co 88220		Identifier MW0 \	Date 5/29/19 - 6/3/19
25	5.5					g Remedi		Project Name: JRU 10	RP Number 2RP-3404, 2RP-346 2RP-3179
		LITHO	LOGI	C /SOII		LING LO		Logged By BEN BELILL	Method:
Lat/Long:		erida taet ir	ichida a i	60% error f	GRO, DRO), and MR(ORIDES, TPH, BTEX D.	6.15"	Total Depth
Comment	All Citio	ride lest il	iciude a	T T	actor.				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholo	gy/Remarks
D	Luz	3.8	~	Min Do	120	120	CL SA	1 A	
P	<112	3.1	N	MNO1 08	121	121			
D	<112	12	~	mwo I DG	122	222			
0	<112	0,4	N	NW108	123	, , 3			
0	TIIS	0.5	N	A40125	124	124			
- 0	ζωι	0,6	N	bunst p	T125	175			
D	<1,L	0.8	2	WAO! D	V 126	126			
0	<112	0.7	h	mwol i	V127	177	ļ.		
D	<112	1.0	~	nwoi D	W128	128			
)	<111Z	0.4	N	Who! O	X 129	125			
D	4112	0,5	N	WASID	Y130	130			
ŋ	4112	L.	N	muolo	₹ 131	131			
					132	+			

	LT Environ	mental, Inc.		Ca	508 Wes arlsbad, I				Identifier MVD Project Name JRU 10	Date: 6/3/19 - 6/4/19 RP Number: 2RP-3404, 2RP-3 2RP-3179
		- /	LITHO	LOGIC	C / SOI	L SAMP	LING LO	OG	Logged By: BEN BELILL	Method:
	Lat/Long					Field Scree		DRIDES, TPH, BTEX	Hole Diameter: 6.15"	Total Depth:
1	Commen	t All Chlo	oride test in	clude a	50% error i		O, and WICC	,	0.13	
	Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology	/Remarks
-	0	(112	0.4	N	WADIE	A 132	132	CL <	SAVA	
	ø	4112	0.7	Ν	WMOI È	B133	133			
	0	LIIZ	0,8	N	MWOIE	C134	134			
	D	Luc	0.9	Ŋ	mwo (E	0135	135			
	9	(I'Z	0.6	Ŋ	WADI	Ę136	136			
,,	0	4.11		h	MWIE	F 137	137			
-	-	3112	0.7				TI		No.	
-	0		1.0	N	MV0) F	6138	138			, It brafred, low
20		luz				€6138 €H139	#		y wy gravel, dry sticity, no oclor	
20	0	luz	0.1	~	MV01 {	∰139	#	CL CLA	sticity, no oclor	brown /red, low
90 35	0	(112	0.1	~	muoi (∰139	134	CL CLA	sticity, no oclor	brown /red, low
000 35 60 5	0 0	(112 (112 (112	1.0 0.1 3.8	~ ~	WASIE	H139	134	CL CLA	sticity, no oclor	brown /red, low
00 35 10	0 0 0	6112 6112 6112 6112	1.0 0.1 3.8 3.5	~ ~ ~ ~	WASIE WASIE	€ ¥139 € ¥140	134	CL CLA	sticity, no oclor	brown /red, low

Manny	LT Environmental Inc. 508 Wes Carlsbad, N Compliance · E					Street co 8822			Project Name	Date 6 // 9 RP Number 2RP-3404, 2RP-3179	2RI
		LITHO	LOGI	C / SOII	LSAMP	LING L	OG		Logged By: BEN BELILL	Method.	
Lat/Long					Field Scree GRO, DRO		ORIDES, TPH O.		Hole Diameter:	Total Depth:	
Commen	t All Chlo	oride test i	nclude a	50% error f							
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholo	gy/Remarks	
9	4112	3.5	N	WM) E	m • I	144	CL	54	A		
þ	\11Z	3,2	٨	WOOLE	N ●	145					
D	112	2.7	λ.	wwo 1 E	b • _	146					
D	<1172	3.1	N	WASI E	१० _	ואין					
D	<112	3.0	N	WAGE	Q • _	ાપજ					
P	1112	1.8	4	WA91 E	R● _	144					
	<11Z	1.5	1	WOIE	50	150	1	V	A		
D					7				FOR	@150°	
					9						
T)					10						
					11						
					12						





STATE ENGINEER OFFICE ROSWELL

								7012	AUG 1	<u>} p</u>	1: 13	
		BER (WELL	•				OSE FILE NUI				<u> </u>	
JON				ATTERY SB-1	(POD-1)		C-03559	<u> </u>				
LOCATION		NER NAME O OPER	(S) PATING CO	•			PHONE (OPTI	ONAL)				
נ	WELL OW	NER MAILI	NG ADDRESS				CITY		STATE	,	ZIP	
GENERAL AND WELL	6 DEST	TA DRIV	/E SUITE 370	0, P.O. BOX 27	60		MIDLANE)	TX	79	9702	
Q.	WEL			DEGREES	MINUTES SECO	NDS						
\LA	1,OCAT	ION L	ATITUDE	32	20	9.00 N	* ACCURACY	REQUIRED; ONE TEN	TH OF A SEC	COND		
(ER/	(FROM	GPS) L	LONGITUDE	103	49 5	5.00 W	• DATUM RE	QUIRED: WGS 84				
GE	DESCRIPT	TION RELAT	LATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS									
-	FROM THE CORNER OF HWY 128 AND WIPP RD GO N FOR 4TH OF MILE TURN L FOLLOW CALICHE RD TO SITE.											
	(2.5 AC	RE)	(10 ACRE)	(40 ACRE)	(160 ACRESECTIO	<u> </u>		TOWNSHIP		RANGE		
۸Ľ	:	1/4	1/4	¼	1	23	∏ NORTH ☑ SOUTH	30	☑ EAST ☐ WEST			
OPTIONAL	SUBDIVIS	ION NAME				LOT NUM	BER	BLOCK NUMBER		UNITATRA		
OPT	LIVEROCE	ADVIIC CUM	West		TD A CW ARI	G						
2.	HIDROOK	DROGRAPHIC SURVEY MAP NUMBER TRACT NUM										
	LICENSE	LICENSE NUMBER NAME OF LICENSED DRILLER NAME OF WELL DRILLING COMPANY										
	WD1478 MARTIN STRAUB STRAUB CORPORATION											
	DRILLING	STARTED	DRILLING END	ED DEPTH OF COM	PLETED WELL (FT)	BORE HOL	E DEPTH (FT)	DEPTH WATER FIR	ST ENCOUN	TERED (FT)		
z	7-3	1-12	7-31-12		0	<u>[</u>	50'	[N/A			
DRILLING INFORMATION	COMPLET	ED WELL IS	S: ARTESIAN	✓ DRY HOLE	SHALLOW (UNCO	NFINED)		STATIC WATER LE	VEL IN COME N/A		.L (FT)	
ORM						<u> </u>		l				
INF.	DRILLING		✓ AIR		ADDITIVES - SPE		 					
ING	DRILLING		✓ ROTARY	HAMMER	CABLE TOOL	OTHE	R - SPECIFY:		,			
31	FROM	H (FT)	BORE HOLI	1	CASING ATERIAL		IECTION (CASING)	INSIDE DIA. CASING (IN)	CASING THICKN		SLOT SIZE (IN)	
3.0	0	50'	5"		N/A		N/A	N/A	N/	'A	N/A	
į												
			<u> </u>		· -				<u> </u>			
			 			<u> </u>		<u> </u>	<u> </u>			
٠,	DEPT FROM	H (FT)	THICKNES: (FT)	S F	DRMATION DESCRIP -INCLUDE WATER)						YIELD (GPM)	
RAT	FROM	то	 		(INCEODE WATER-	DEARING	CA VIIILS OF	TRACTORE ZON			 	
SST							 _					
Z Z			<u> </u>	_								
BEA												
ER			<u> </u>									
4. WATER BEARING STRATA	METHOD L	ISED TO ES	TIMATE YIELD OF V	VATER-BEARING STRA	ITA			TOTAL ESTIMATED	WELL YIELD	(GPM)		
4	_							[· ·		
	FOR OSE INTERNAL USE WELL RECORD & LOG (Version 6/9/08)											
í	FOR OSE		AL USE	a —	POD NUMBE	R	7	TRN NUMBE		(Version 6/1 フ/2 フ	9/08)	

<u>a</u>	TYPE O	F PUMP:	SUBMER	•	☐ JET	NO PUMP - WELL NOT EQUIPPED		·			
, U.W			TURBIN		CYLINDER	OTHER - SPECIFY:		<u> </u>			
SEAL AND PUMP	Δ ΝΝ̈́ΙΙ	JLAR	DEPTH FROM	TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METH(
Z L	SEAL	AND	0	2'	5"	. 5 BAGS OF CEMENT		TOPL	.OAD		
5. SI	GRAVE	L PACK	2'	50'	5"	11BAGS OF 3/8 HOLE PLUG		TOPL	.OAD		
	DEPT	H (FT)	THICK	NESS		COLOR AND TYPE OF MATERIAL ENCOUNT	RED	WA.	rer		
	FROM	TO	(F)	r)	(INCL	(INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)					
	0	2'	2	•		TAN FINE SAND - CALICHE		☐ YES	☑ NO		
	2'	5'	3	•		BASIN FINE SAND - CALICHE		☐ YES	Ø NO		
	5'	8"	3	•		TAN FINE SAND - SANDSTONE		☐ YES	Ø NO		
	8'	13'	5	•		RED FINE SAND		☐ YES	☑ NO		
ا بـ	13'	15'	2	•		TAN FINE SAND		☐ YES	Ø NO		
WEI	15'	36'	21	1'	RED	FINE SAND (DRK) - SANDSTONE W	ITH CLAY	☐ YES	Ø NO		
GEOLOGIC LOG OF WELL	36'	50'	14	t '		RED SILTY SAND - SILTY CLAY	1	☐ YES	☑ NO		
00	TD	50'						☐ YES	□ NO		
101				•				☐ YES	□ NO		
007								☐ YES	□ио		
, 5.E.O.								☐ YES	□ NO		
6. (<u> </u>				☐ YES	□ NO		
								☐ YES	□ NO		
								☐ YES	□ NO		
	·						·	☐ YES	□ NO		
								☐ YES	□ NO		
								☐ YES	□ NO		
İ			АТТАСН	ADDITION	AL PAGES AS NE	EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL	•	 -		
			метнор:	BAILE	R 🗍 PUMP	☐ AIR LIFT ☐ OTHER - SPECIFY:					
ONAL INFO	WELL	TEST				ATA COLLECTED DURING WELL TESTING, I		ME, END TI	ME,		
NAL			l		NO DISCHARGE	AND DRAWDOWN OVER THE TESTING FERIO	, , , , , , , , , , , , , , , , , , ,				
TIO	1		MENTS OR EXPL			ED UPON COMPLETION OF SAMPL	ING				
ADDITIC		COUNT		JOED AIN	D ABANDON	EB OF ON COMPLETION OF SAMILE	1140				
\ 3	EDWAF	RD BRY	AN (DRILL	ING SUP	ERVISOR)						
7. TEST											
7. Ti	ļ										
哥	THE UN	DERSIGNI	ED HEREBY (CERTIFIES T	THAT, TO THE BE	ST OF HIS OR HER KNOWLEDGE AND BELIE O THAT HE OR SHE WILL FILE THIS WELL RE	F, THE FOREGOING IS CORD WITH THE STA	S A TRUE A	ND ER AND		
TUF						ON OF WELL DRILLING:					
SIGNATURE		Ma	Ii Xt	الم		8-10-12					
8. SI	 '	1 70	SIGNATUR	OF OF DRILL	ED .	DATE					
<u> </u>			SIGNATUR	RE OF DRILL	.c.K	DATE	7-5				

FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)
FILE NUMBER (- 3559	POD NUMBER	TRN NUMBER 507/37
LOCATION		PAGE 2 OF 2



APPENDIX B

Photographic Log



Photographic Log
XTO Energy, Inc
James Ranch Unit 108H
Incident Number nAPP2227351943





Photograph 1 Date: 7/26/2022 Description: Site assessment activities, release extent

View: Southwest

Photograph 2 Date: 9/8/2022 Description: Delineation activities, release extent

View: Northwest



Photograph 3 Date: 9/8/2022 Description: Delineation activities, release extent

View: South



Photograph 4 Date: 10/20/2022

Description: Delineation activities, PH01

View: East



APPENDIX C

Lithologic Soil Sampling Logs

		+						Sample Name: PH01	Date: 10/20/2022
			P	1 2	0	LU	M	Site Name: JRU 108H	, ,
					Enginee			Incident Number: NAPP22179315	599
	- 6	Hydi	roge	eologic	Consulta	nts		Job Number: 03E1558090	
		LITHOL	.OGI	C / SOIL	SAMPLING	LOG		Logged By: BB	Method: Backhoe
	rdinates: 3							Hole Diameter: N/A	Total Depth: 7'
			_					PID for chloride and vapor, respe- ion factor was added to all chlorid	•
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	·
					1	0	SP	0-4', SAND, moist, reddish l graded, fine grained, som	brown, poorly
М	1,037	3,516	Υ	SS01	0.5	- -		H/C odor, dark brown-gr	
М	470	438	N	PH01	1	1		1'-4', no stain.	
	., •	.55	. •			- * -			
М	2,676	565	N	PH01	2 _	<u>-</u> - 2			
М	11,748	879	N	PH01	3 _	- - 3			
М	3,365	1,173	N	PH01	4 _	4	ССНЕ	4'-7', CALICHE, moist, light moderately consolidated grained poorly graded light	d, some fine-medium
М	19,297	1,055	N		- - -	- - 5 -		H/C odor, no stain.	A. o, serie, serieria
М	21,151	61	N	PH01	6 _	6 6		6'-7', moderately-poorly co odor.	nsolidated, trace H/C
_	7 672	4.0		DI 104		-		071	
D	7,673	1.8	N	PH01	7	7	TD	@7', no odor. Total depth at 7 feet bgs.	
					-	_			
						8			
					-	<u>-</u>			
						9			
						_ ³			
					-	_			
						10			
					_	<u>-</u>			
					- -	11 			
]	- -			
					•	12			



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. A 40% correction factor was added to all chloride field screenings.

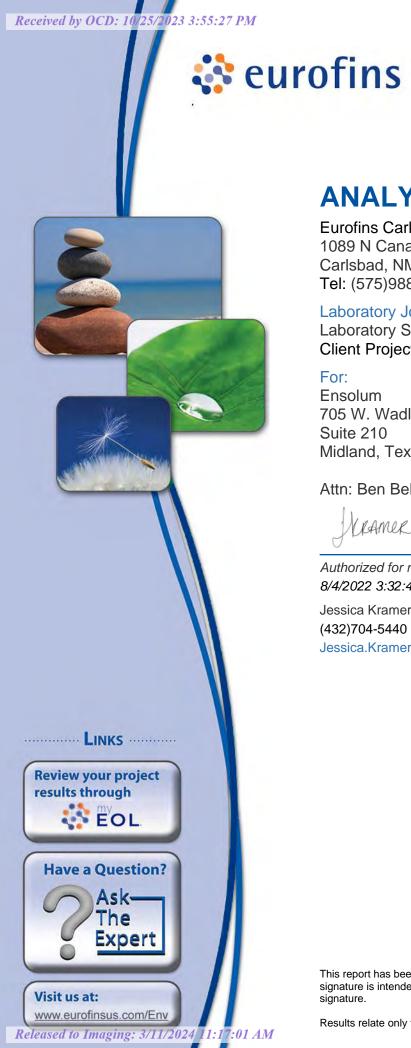
								-
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M M	2,615 >3600	326 51	Y N	SS02 PH02	0.5 _ 1 _	0	SP	0-3', SAND, moist, reddish brown, poorly graded, fine grained, some small roots, strong H/C odor, dark brown-grey staining. 0.5'-3', no stain. 1'-2.5', mild H/C odor.
М	>3600	8.9	N	PH02	2	2		2.5'-3', no odor.
M	>3600	1.3	N		- - -	3	ССНЕ	3'-7', CALICHE, moist, light brown-light grey, moderately consolidated, some fine-medium grained poorly graded light grey sand, no
М	11,748	1.0	N	PH02	4 _	4		stain, no odor.
D	>3600	0.1	N	PH02	5 <u>-</u>	5		
D	>3600	0.2	N		- - -	_ _ _ 6		6'-7', moderately-poorly consolidated.
D	>3600	0.6	N	PH02	7	7	TD	Total depth at 7 feet bgs.
					- - - -	- - 8		
					- - -	9		
					- - -	10		
					- - - -	11		
					-	12		

								Sample Name: BH03	Date: 9/8/2022
		E	N	S	0	L U	M	Site Name: JRU 108H	Dutc. 3/ 0/ 2022
					Engineer			Incident Number: NAPP2217931	599
					Consultar			Job Number: 03E1558090	
		LITHOL	OGIO	c / soil s	SAMPLING	LOG		Logged By: BB	Method: Hand Auger
Coord		2.33641,-		_	, Liive			Hole Diameter: N/A	Total Depth: 1'
					ith HACH Ch	loride Test S	Strips and	PID for chloride and vapor, respe	·
			_					on factor was added to all chloric	The state of the s
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic D	,
					1	0	SP	0-1', SAND, moist, reddish graded, fine grained, so	brown, poorly me small roots, mild
М	280	630	Υ	SS03	0.5	- -		H/C odor, dark brown st	aining.
М	<112	8.9	N	BH03	1	_ 1		0.5'-1', no stain, no odor.	
'''	-116	0.5	. •	27100		-	TD	Total depth at 1 foot bgs,	auger refusal.
					_	_			
					_	_ 2			
					-	-			
					_	-			
					_	_ 3			
					_	-			
					-	4			
					_				
					_	_			
					_	_ 5			
					-	-			
					_	-			
					_	_ 6			
					_	- -			
					-	7			
					-	<u> </u>			
					_	_			
						8			
					-	-			
					-	- 			
					_	9			
					-	<u>-</u>			
					<u>-</u>	10			
					-	_ 10			
					_	-			
					_	11			
					<u>-</u>	-			
					_	- -			
						12			



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2653-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/4/2022 3:32:46 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum

Project/Site: JRU 108H

Laboratory Job ID: 890-2653-1 SDG: Eddy County NM

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	8
QC Sample Results	9
QC Association Summary	15
Lab Chronicle	18
Certification Summary	19
Method Summary	20
Sample Summary	21
Chain of Custody	22
Receint Checklists	23

3

4

6

8

10

12

13

Definitions/Glossary

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside accep
*+	LCS and/or LCSD is outside accer

ptance limits, low biased. LCSD is outside acceptance limits, high biased. *1 LCS/LCSD RPD exceeds control limits.

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

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**

Indicates the analyte was analyzed for but not detected.

Glossary

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

%R 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) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

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

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

NC Not Calculated

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

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

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum Project/Site: JRU 108H

Job ID: 890-2653-1 SDG: Eddy County NM

Job ID: 890-2653-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2653-1

Receipt

The samples were received on 7/26/2022 4:02 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 4.2°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS02 (890-2653-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-31465 and analytical batch 880-31452 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS01 (890-2653-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2653-1

Client Sample Results

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS01

Date Collected: 07/26/22 09:00 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	1.05		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	10
Toluene	11.6		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	10
Ethylbenzene	5.96		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	10
m-Xylene & p-Xylene	15.6		0.400	mg/Kg		08/04/22 08:51	08/04/22 14:19	10
o-Xylene	7.28		0.200	mg/Kg		08/04/22 08:51	08/04/22 14:19	10
Xylenes, Total	22.9		0.400	mg/Kg		08/04/22 08:51	08/04/22 14:19	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130			08/04/22 08:51	08/04/22 14:19	10
1,4-Difluorobenzene (Surr)	110		70 - 130			08/04/22 08:51	08/04/22 14:19	10
Method: Total BTEX - Total BTE	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	41.5		0.400	mg/Kg			08/04/22 09:41	
Method: 8015 NM - Diesel Rang	e Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	23200		250	mg/Kg			07/31/22 10:38	
Method: 8015B NM - Diesel Rai	nge Organics (Di	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	2140		250	mg/Kg		07/29/22 08:50	07/31/22 03:41	
Diesel Range Organics (Over C10-C28)	16300		250	mg/Kg		07/29/22 08:50	07/31/22 03:41	
Oll Range Organics (Over C28-C36)	4760		250	mg/Kg		07/29/22 08:50	07/31/22 03:41	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	107		70 - 130			07/29/22 08:50	07/31/22 03:41	
o-Terphenyl	349	S1+	70 - 130			07/29/22 08:50	07/31/22 03:41	
Method: 300.0 - Anions, Ion Ch	romatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	4930		50.0	mg/Kg			07/30/22 22:25	

Client Sample ID: SS02 Lab Sample ID: 890-2653-2 Matrix: Solid

Date Collected: 07/26/22 09:05 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0499	U *- *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
Toluene	0.109	*- *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
Ethylbenzene	0.574	*- *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
m-Xylene & p-Xylene	0.836	*- *1	0.0998	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
o-Xylene	0.458	*+ *1	0.0499	mg/Kg		08/02/22 14:44	08/04/22 00:59	25
Xylenes, Total	1.29	*1	0.0998	mg/Kg		08/02/22 14:44	08/04/22 00:59	25

Job ID: 890-2653-1

Matrix: Solid

Lab Sample ID: 890-2653-2

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS02

Date Collected: 07/26/22 09:05 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	186	S1+	70 - 130	08/02/22 14:44	08/04/22 00:59	25
1,4-Difluorobenzene (Surr)	94		70 - 130	08/02/22 14:44	08/04/22 00:59	25

Method: Total BTEX - Total BTEX Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.98	0.0998	mg/Kg			08/04/22 09:41	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	12500	250	mg/Kg			07/31/22 10:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1050		250	mg/Kg		07/29/22 08:50	07/31/22 04:00	5
Diesel Range Organics (Over C10-C28)	9700		250	mg/Kg		07/29/22 08:50	07/31/22 04:00	5
Oll Range Organics (Over C28-C36)	1720		250	mg/Kg		07/29/22 08:50	07/31/22 04:00	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	07/29/22 08:50	07/31/22 04:00	5
o-Terphenyl	162	S1+	70 - 130	07/29/22 08:50	07/31/22 04:00	5

Method: 300.0 - Anions, Ion Chr	omatography - Soluble
Analyto	Posult Qualifier

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1650		25.0	mg/Kg			07/30/22 22:48	5

Lab Sample ID: 890-2653-3 **Client Sample ID: SS03**

Date Collected: 07/26/22 09:10 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Mothod: 9021R	- Volatilo	Organic Co	mnounde (GC)

Method: 8021B - Volatile Orga	nic Compounds	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0497	U *- *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Toluene	0.594	*- *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Ethylbenzene	3.66	*- *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
m-Xylene & p-Xylene	8.72	*- *1	0.0994	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
o-Xylene	0.276	*+ *1	0.0497	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Xylenes, Total	9.00	*1	0.0994	mg/Kg		08/02/22 14:44	08/04/22 01:19	25
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130			08/02/22 14:44	08/04/22 01:19	25
1,4-Difluorobenzene (Surr)	90		70 - 130			08/02/22 14:44	08/04/22 01:19	25

_					
1,4-Difluorobenzene (Surr)	90	70 - 130	08/02/22 14:44	08/04/22 01:19	25
4-Bromotiuoropenzene (Surr)	117	70 - 130	08/02/22 14:44	08/04/22 01:19	25

Method: Total BTEX - Total BTEX Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	13.3	0.0994	mg/Kg			08/04/22 09:41	1

Matrix: Solid

Matrix: Solid

Dil Fac

Analyzed

07/30/22 22:56

Lab Sample ID: 890-2653-3

Client Sample Results

Client: Ensolum Job ID: 890-2653-1
Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS03

Date Collected: 07/26/22 09:10 Date Received: 07/26/22 16:02

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

188

Sample Depth: 0.5

Analyte

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	12400		249	mg/Kg			07/31/22 10:38	1
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	1000		249	mg/Kg		07/29/22 08:50	07/31/22 04:20	5
(GRO)-C6-C10								
Diesel Range Organics (Over	9420		249	mg/Kg		07/29/22 08:50	07/31/22 04:20	5
C10-C28)								
Oll Range Organics (Over	1960		249	mg/Kg		07/29/22 08:50	07/31/22 04:20	5
C28-C36)								
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130			07/29/22 08:50	07/31/22 04:20	5
o-Terphenyl	178	S1+	70 - 130			07/29/22 08:50	07/31/22 04:20	5

RL

5.05

Unit

mg/Kg

D

Prepared

Surrogate Summary

Client: Ensolum Job ID: 890-2653-1
Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

Active Spike Duplicate SS01 SS02 SS03 Matrix Spike Duplicate Matrix Spike Matrix Spike Matrix Spike Duplicate	BFB1 (70-130) 105 102 139 S1+ 186 S1+ 117	97 97 110 94 99 96			
Matrix Spike Matrix Spike Duplicate SS01 SS02 SS03 Matrix Spike	105 102 139 S1+ 186 S1+ 117 104	97 97 110 94 90			
Matrix Spike Duplicate 6S01 6S02 6S03 Matrix Spike	102 139 S1+ 186 S1+ 117 104	97 110 94 90			
SS01 SS02 SS03 Matrix Spike	139 S1+ 186 S1+ 117 104	110 94 90			
SS02 SS03 Matrix Spike	186 S1+ 117 104	94 90			
SS03 ⁄/atrix Spike	117 104	90			
/latrix Spike	104				
		96			
Matrix Spike Duplicate					
	106	93			
ab Control Sample	113	93			
ab Control Sample	103	94			
ab Control Sample Dup	90	87			
ab Control Sample Dup	106	97			
Method Blank	106	87			
/lethod Blank	99	87			
Method Blank	100	91			
Surr)					
	ab Control Sample Dup ab Control Sample Dup lethod Blank lethod Blank lethod Blank	ab Control Sample Dup 90 ab Control Sample Dup 106 lethod Blank 106 lethod Blank 99 lethod Blank 100 Surr)	ab Control Sample Dup 90 87 ab Control Sample Dup 106 97 lethod Blank 106 87 lethod Blank 99 87 lethod Blank 100 91 Surr)	ab Control Sample Dup 90 87 ab Control Sample Dup 106 97 lethod Blank 106 87 lethod Blank 99 87 lethod Blank 100 91	ab Control Sample Dup 90 87 ab Control Sample Dup 106 97 lethod Blank 106 87 lethod Blank 99 87 lethod Blank 100 91

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2646-A-1-B MS	Matrix Spike	87	84	
890-2646-A-1-C MSD	Matrix Spike Duplicate	87	84	
890-2653-1	SS01	107	349 S1+	
890-2653-2	SS02	98	162 S1+	
890-2653-3	SS03	106	178 S1+	
LCS 880-30965/2-A	Lab Control Sample	101	102	
LCSD 880-30965/3-A	Lab Control Sample Dup	93	93	
MB 880-30965/1-A	Method Blank	91	101	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Carlsbad

Released to Imaging: 3/11/2024 11:17:01 AM

2

5

5

7

9

13

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Matrix: Solid Analysis Batch: 31375 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31323

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	08/02/22 13:15	08/03/22 10:46	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 13:15	08/03/22 10:46	1

Lab Sample ID: MB 880-31337/5-A

Client Sample ID: Method Blank

Matrix: Solid Analysis Batch: 31375							Prep Type: Prep Bate	
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result Qua	alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Toluene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Ethylbenzene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
m-Xylene & p-Xylene	<0.00400 U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
o-Xylene	<0.00200 U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Xylenes, Total	<0.00400 U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 14:44	08/03/22 21:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 14:44	08/03/22 21:53	1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 31337

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09999 mg/Kg 100 70 - 130 Toluene 0.100 0.1031 mg/Kg 103 70 - 130 0.100 Ethylbenzene 0.1082 mg/Kg 108 70 - 130 0.200 0.2220 70 - 130 m-Xylene & p-Xylene mg/Kg 111 0.100 0.1387 *+ 70 - 130 o-Xylene mg/Kg 139

LCS LCS

Surrogate	%Recovery Qua	lifier Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab	Control Sample Dup
	Date of Taxable Taxable I/NIA

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LUSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0998	0.05262	*- *1	mg/Kg		53	70 - 130	62	35

QC Sample Results

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.0998	0.06071	*- *1	mg/Kg		61	70 - 130	52	35
Ethylbenzene	0.0998	0.06794	*- *1	mg/Kg		68	70 - 130	46	35
m-Xylene & p-Xylene	0.200	0.1297	*- *1	mg/Kg		65	70 - 130	52	35
o-Xylene	0.0998	0.09111	*1	mg/Kg		91	70 - 130	41	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

Lab Sample ID: 890-2656-A-1-F MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 31375

Prep Type: Total/NA

Prep Batch: 31337

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U *- *1	0.101	0.08722		mg/Kg		87	70 - 130	
Toluene	<0.00199	U *- *1	0.101	0.08202		mg/Kg		82	70 - 130	
Ethylbenzene	<0.00199	U *- *1	0.101	0.08158		mg/Kg		81	70 - 130	
m-Xylene & p-Xylene	<0.00398	U *- *1	0.201	0.1625		mg/Kg		81	70 - 130	
o-Xylene	<0.00199	U *+ *1	0.101	0.09304		mg/Kg		92	70 - 130	

MS MS

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

Lab Sample ID: 890-2656-A-1-G MSD

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31337

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	< 0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	< 0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: MB 880-31465/5-A

Matrix: Solid

Analysis Batch: 31452

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31465

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	08/04/22 08:51	08/04/22 10:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/04/22 08:51	08/04/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/04/22 08:51	08/04/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/04/22 08:51	08/04/22 10:53	1

Eurofins Carlsbad

Page 10 of 24

QC Sample Results

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-31465/5-A

Matrix: Solid

Analysis Batch: 31452

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31465

ı									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	o-Xylene	<0.00200	U	0.00200	mg/Kg		08/04/22 08:51	08/04/22 10:53	1
	Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/04/22 08:51	08/04/22 10:53	1

мв мв

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	08/04/22 08:51	08/04/22 10:53	1
1,4-Difluorobenzene (Surr)	91		70 - 130	08/04/22 08:51	08/04/22 10:53	1

Lab Sample ID: LCS 880-31465/1-A **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix. Juliu			Piep Type. Total/NA
Analysis Batch: 31452			Prep Batch: 31465
	Spike	LCS LCS	%Rec

Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09988 mg/Kg 100 70 - 130 Toluene 0.100 0.1006 mg/Kg 101 70 - 130 0.100 0.1038 104 70 - 130 Ethylbenzene mg/Kg m-Xylene & p-Xylene 0.200 0.2107 mg/Kg 105 70 - 130 o-Xylene 0.100 0.1145 70 - 130 mg/Kg 114

LCS LCS

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1.4-Difluorobenzene (Surr)	94	70 - 130

Lab Sample ID: LCSD 880-31465/2-A

Matrix: Solid

Analysis Batch: 31452

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

Prep Type: Total/NA

Prep Batch: 31465

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09085		mg/Kg		91	70 - 130	9	35
Toluene	0.100	0.08782		mg/Kg		88	70 - 130	14	35
Ethylbenzene	0.100	0.09053		mg/Kg		91	70 - 130	14	35
m-Xylene & p-Xylene	0.200	0.1832		mg/Kg		92	70 - 130	14	35
o-Xylene	0.100	0.1004		mg/Kg		100	70 - 130	13	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1.4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: 880-17728-A-1-A MS

Matrix: Solid

Analysis Batch: 31452

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

Prep Type: Total/NA

Prep Batch: 31465

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.100	0.08136		mg/Kg		81	70 - 130	
Toluene	<0.00200	U	0.100	0.07618		mg/Kg		76	70 - 130	
Ethylbenzene	<0.00200	U F1	0.100	0.07372		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1469		mg/Kg		73	70 - 130	
o-Xylene	<0.00200	U	0.100	0.07974		mg/Kg		80	70 - 130	

Client: Ensolum Job ID: 890-2653-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: 880-17728-A-1-A MS

Matrix: Solid

Analysis Batch: 31452

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31465

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 105 70 - 130 1,4-Difluorobenzene (Surr) 97 70 - 130

Lab Sample ID: 880-17728-A-1-B MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31452

Prep Type: Total/NA

Prep Batch: 31465

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0998	0.08732		mg/Kg		87	70 - 130	7	35
Toluene	<0.00200	U	0.0998	0.07748		mg/Kg		78	70 - 130	2	35
Ethylbenzene	<0.00200	U F1	0.0998	0.06936	F1	mg/Kg		69	70 - 130	6	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1380	F1	mg/Kg		69	70 - 130	6	35
o-Xylene	<0.00200	U	0.0998	0.07575		mg/Kg		76	70 - 130	5	35

MSD MSD

MS MS

%Recovery Qualifier Surrogate Limits 4-Bromofluorobenzene (Surr) 102 70 - 130 1,4-Difluorobenzene (Surr) 97 70 - 130

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

Lab Sample ID: MB 880-30965/1-A

Matrix: Solid

Analysis Batch: 31053

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30965

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	07/29/22 08:	07/30/22 19:51	1
o-Terphenyl	101		70 - 130	07/29/22 08:	50 07/30/22 19:51	1

Lab Sample ID: LCS 880-30965/2-A

Matrix: Solid

Analysis Batch: 31053

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30965

		Spike	LCS	LCS				%Rec	
l	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
l	Gasoline Range Organics	1000	1058		mg/Kg		106	70 - 130	
l	(GRO)-C6-C10								
l	Diesel Range Organics (Over	1000	1040		mg/Kg		104	70 - 130	
П	040,000)								

C10-C28)

	LUS	LUS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	102		70 - 130

QC Sample Results

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

LCSD LCSD

949.7

972.0

Result Qualifier

Unit

mg/Kg

mg/Kg

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

Lab Sample ID: LCSD 880-30965/3-A

Spike

Added

1000

1000

Matrix: Solid

Analysis Batch: 31053

Gasoline Range Organics

Client Sample ID: Lab Control Sample Dup

97

Prep Type: Total/NA Prep Batch: 30965

7

RPD Limit %Rec Limits RPD D 95 70 - 130 11 20

70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

(GRO)-C6-C10 Diesel Range Organics (Over

Analyte

C10-C28)

LCSD LCSD

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

Lab Sample ID: 890-2646-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 31053** Prep Batch: 30965 MS MS %Rec Sample Sample Spike

Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits 999 Gasoline Range Organics <49.9 U 1211 mg/Kg 116 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 846.5 mg/Kg 85 70 - 130

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 87 70 - 130 84 70 - 130 o-Terphenyl

Lab Sample ID: 890-2646-A-1-C MSD

Matrix: Solid

Analysis Batch: 31053

Prep Batch: 30965 Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit <49.9 U 999 20 Gasoline Range Organics 1295 125 70 - 130 mg/Kg (GRO)-C6-C10 999 863.7 86 Diesel Range Organics (Over <49.9 L mg/Kg 70 - 130 2 20 C10-C28)

Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 87 84 70 - 130 o-Terphenyl

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

MB MB

MSD MSD

Analyte Result Qualifier RL Unit Analyzed Dil Fac D Prepared Chloride 5.00 07/30/22 22:01 <5.00 U mg/Kg

Eurofins Carlsbad

Lab Sample ID: LCS 880-30913/2-A

Lab Sample ID: LCSD 880-30913/3-A

Job ID: 890-2653-1

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analysis Batch: 31002

Matrix: Solid

Matrix: Solid

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits D Chloride 250 261.9 mg/Kg 105 90 - 110

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analysis Batch: 31002

Spike LCSD LCSD %Rec RPD Added Qualifier RPD Limit Analyte Result Unit D %Rec Limits Chloride 250 267.7 mg/Kg 107 90 - 110 20

Lab Sample ID: 890-2653-1 MS **Client Sample ID: SS01 Matrix: Solid**

Prep Type: Soluble Analysis Batch: 31002

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

Chloride 4930 2500 7650 mg/Kg 109 90 - 110

Lab Sample ID: 890-2653-1 MSD **Client Sample ID: SS01 Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

MSD MSD RPD Sample Sample Spike %Rec Qualifier Analyte Qualifier Added Unit %Rec RPD Limit Result Result Limits Chloride 4930 2500 7677 110 90 - 110 20 mg/Kg

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 250 Chloride 149 378.1 mg/Kg 92 90 - 110

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added RPD Limit Analyte Result Qualifier Unit D %Rec Limits Chloride 149 250 378.6 mg/Kg 92 90 - 110 20

QC Association Summary

Client: Ensolum
Project/Site: JRU 108H
Job ID: 890-2653-1
SDG: Eddy County NM

GC VOA

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-2	SS02	Total/NA	Solid	5035	
890-2653-3	SS03	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-2	SS02	Total/NA	Solid	8021B	31337
890-2653-3	SS03	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	31337
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31337

Analysis Batch: 31452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8021B	31465
MB 880-31465/5-A	Method Blank	Total/NA	Solid	8021B	31465
LCS 880-31465/1-A	Lab Control Sample	Total/NA	Solid	8021B	31465
LCSD 880-31465/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31465
880-17728-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	31465
880-17728-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31465

Prep Batch: 31465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	5035	
MB 880-31465/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31465/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31465/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17728-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-17728-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	Total BTEX	Fiep Batch
890-2653-2	SS02	Total/NA	Solid	Total BTEX	
890-2653-3	SS03	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2653-1

SDG: Eddy County NM

GC Semi VOA

Prep Batch: 30965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8015NM Prep	
890-2653-2	SS02	Total/NA	Solid	8015NM Prep	
890-2653-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8015B NM	30965
890-2653-2	SS02	Total/NA	Solid	8015B NM	30965
890-2653-3	SS03	Total/NA	Solid	8015B NM	30965
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015B NM	30965
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30965
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30965
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	30965
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30965

Analysis Batch: 31125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Total/NA	Solid	8015 NM	
890-2653-2	SS02	Total/NA	Solid	8015 NM	
890-2653-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2653-1	SS01	Soluble	Solid	DI Leach	_
890-2653-2	SS02	Soluble	Solid	DI Leach	
890-2653-3	SS03	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-1 MS	SS01	Soluble	Solid	DI Leach	
890-2653-1 MSD	SS01	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2653-1	SS01	Soluble	Solid	300.0	30913
890-2653-2	SS02	Soluble	Solid	300.0	30913
890-2653-3	SS03	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-1 MS	SS01	Soluble	Solid	300.0	30913
890-2653-1 MSD	SS01	Soluble	Solid	300.0	30913

Eurofins Carlsbad

Page 16 of 24

Released to Imaging: 3/11/2024 11:17:01 AM

2

3

4

6

8

9

11

12

15

QC Association Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2653-1

SDG: Eddy County NM

HPLC/IC (Continued)

Analysis Batch: 31002 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

1

4

5

9

4 4

12

Job ID: 890-2653-1 SDG: Eddy County NM

Client: Ensolum Project/Site: JRU 108H

Lab Sample ID: 890-2653-1

Matrix: Solid

Matrix: Solid

Client Sample ID: SS01

Date Collected: 07/26/22 09:00 Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	31465	08/04/22 08:51	MR	EETSC MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	31452	08/04/22 14:19	MR	EETSC MIC
Total/NA	Analysis	Total BTEX		1			31483	08/04/22 09:41	SM	EETSC MIE
Total/NA	Analysis	8015 NM		1			31125	07/31/22 10:38	AJ	EETSC MIC
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30965	07/29/22 08:50	DM	EETSC MIC
Total/NA	Analysis	8015B NM		5			31053	07/31/22 03:41	AJ	EETSC MIC
Soluble	Leach	DI Leach			5 g	50 mL	30913	07/28/22 10:42	CH	EETSC MIC
Soluble	Analysis	300.0		10			31002	07/30/22 22:25	SMC	EETSC MID

Client Sample ID: SS02 Lab Sample ID: 890-2653-2

Date Collected: 07/26/22 09:05

Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	31337	08/02/22 14:44	MR	EETSC MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	31375	08/04/22 00:59	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31483	08/04/22 09:41	SM	EETSC MIC
Total/NA	Analysis	8015 NM		1			31125	07/31/22 10:38	AJ	EETSC MIC
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30965	07/29/22 08:50	DM	EETSC MIL
Total/NA	Analysis	8015B NM		5			31053	07/31/22 04:00	AJ	EETSC MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30913	07/28/22 10:42	CH	EETSC MI
Soluble	Analysis	300.0		5			31002	07/30/22 22:48	SMC	EETSC MID

Client Sample ID: SS03 Lab Sample ID: 890-2653-3

Date Collected: 07/26/22 09:10 Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31337	08/02/22 14:44	MR	EETSC MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	31375	08/04/22 01:19	MR	EETSC MIC
Total/NA	Analysis	Total BTEX		1			31483	08/04/22 09:41	SM	EETSC MIE
Total/NA	Analysis	8015 NM		1			31125	07/31/22 10:38	AJ	EETSC MIE
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30965	07/29/22 08:50	DM	EETSC MIC
Total/NA	Analysis	8015B NM		5			31053	07/31/22 04:20	AJ	EETSC MIC
Soluble	Leach	DI Leach			4.95 g	50 mL	30913	07/28/22 10:42	CH	EETSC MIC
Soluble	Analysis	300.0		1			31002	07/30/22 22:56	SMC	EETSC MID

Laboratory References:

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

Eurofins Carlsbad

Matrix: Solid

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2653-1
Project/Site: JRU 108H SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority	Pre	ogram	Identification Number	Expiration Date
Texas	NE	LAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, but	t the laboratory is not certifi	ed by the governing authority. This list ma	av include analytee for w
the agency does not of	' '	t the laboratory is not certifi	ed by the governing additionty. This list the	ay include analytes for v
,	' '	Matrix	Analyte	ay include analytes for v
the agency does not of	fer certification.	,	, , ,	ay include analytes for v

3

4

_

9

4 4

Method Summary

Job ID: 890-2653-1 Client: Ensolum Project/Site: JRU 108H

JUD ID. 090-2055-1
SDG: Eddy County NM

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

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

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2653-1

SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Dep
890-2653-1	SS01	Solid	07/26/22 09:00	07/26/22 16:02	0.5
890-2653-2	SS02	Solid	07/26/22 09:05	07/26/22 16:02	0.5
890-2653-3	SS03	Solid	07/26/22 09:10	07/26/22 16:02	0.5

Relinquish

Received by: (Signature)

6 C. 12.

(CO)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020.2

eurofins 🔆 **Environment Testing**

Project Manager:

Chain of Custody

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

Work Order No:

			City Co. (in directions)	14)	011	Ca									
Facility			meld vineaman	P.	X T	Energy	lnc				Program: U	ST/PST	PRP Bro		Superfund
tional Darke	diane		Address.	1	3104	F Gre	en Street				State of Pro	oject:	1		
NM 88220			City, State ZIP:		Carls	bad, N	M 88220				Reporting: L	evel II Le	yel III 🗌 P		Level IV
9898540852		Email:	bbelill@ensol	um.co	B						Deliverables	s: EDD	ADa	aPT ☐ Other:	
JRU 108H		Turn	Around						ANALY	SIS RE	QUEST			Preservative Codes	odes
03E155809	ō	✓ Routine	Rush	Pres.					-					None: NO DI W	DI Water: H ₂ O
Eddy County,		Due Date:	5 day TAT											Cool: Cool MeC	MeOH: Me
Liz Cheli		TAT starts the	day received by									_	_		HNO ₃ : HN
N/A)	the lab, if rece	eived by 4:30pm	rs											NaOH: Na
Temp Blank:	(es No	Wet Ice:	(Yes) No	nete	.0)									H ₃ PO ₄ : HP	
Yes No	Thermomete	i ID:	DWW-DD	ırar	300									NaHSO ₄ : NABIS	
Yes No (N/A		actor:	0.0	Pa	PA:									Na ₂ S ₂ O ₃ : NaSO ₃	
No		Reading:	4.4	_	S (E				890-265	3 Cha	in of Custody	-		Zn Acetate+NaOH: Zn	!
	Corrected Te	emperature:	5		IDE	015)	8021				-	-	_	NaOH+Ascorbic Acid:	SAPC
Sample Identification Matrix	Date Sampled	Time Sampled	Depth Comp	Con		TPH (8	BTEX (Sample Comments	nents
S	7/26/2022	900	0.5 Com	7	×	×	×							Incident ID: nAPP2217931599	217931599
S	7/26/2022	905	0.5 Com	0 1	×	×	×								
S	7/26/2022	910	0.5 Com	7	×	×	×	+		+				Cost Center: 1139071001	71001
										-					
				T				\vdash		-					
					Γ					-					
					i										
										-					
										_					
										_					
0.8 / 6020:	8	- 11		u	Sb A	s Ba	Φ.	က္ခ	Y Co Cu	Fe P	δ	Ni K Se	B	Na Sr Tl Sn U V Zn	١
(s) to be analy		TCLP / SI	PLP 6010: 8F	RCRA	Sb	As Ba	Be Cd	00	Cu Pb N	n Mc	Ni Se Ag		Hg: 163	1/245.1/7470/7471	
nd relinquishmen	of samples COD	stitutes a valid p	urchase order fro	m client				0,00						The same of the sa	
	## 100 Ensolum Ensolum 3122 National Parks	Company Name Ensolum Company Name XTO Energy, Inc.	Itional Parks Hwy. JRU 108H Turn 03E1558090 Email: JRU 108H Turn 03E1558090	es yo Du trection Facilities Se/2022 S	Dute Parected Tem	es yo Du transper II Transper	es No Unit of the Process of the Pro	BES NO TO THE PROPERTY OF THE	Company Name: XTO Energy, Inc. Address: 3104 E. Green Street	Company Name: XTO Energy, Inc. Program: UST/PST PR Address: 3104 E. Green Street Reporting: Level it Leve City, State ZIP: Carlsbad, NM 88220 Carlsbad, NM 88220 Email: bbellil@ensolum.com ANALYSIS REQUEST Turn Around	Company Name: XTO Energy, Inc. Address: 3104 E. Green Street PRP Brown				

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2653-1

SDG Number: Eddy County NM

. . .

Login Number: 2653 List Number: 1 List Source: Eurofins Carlsbad

•		
List Nun	nber: 1	
Creator:	Clifton,	Cloe

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

Euronnis Carisbau

1

4

6

8

10

4.0

13

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2653-1

SDG Number: Eddy County NM

Login Number: 2653

List Source: Eurofins Midland
List Number: 2

List Creation: 07/28/22 10:13 AM

Creator: Rodriguez, Leticia

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

1

4

6

8

10

46

13

14

<6mm (1/4").



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2655-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/5/2022 12:32:51 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-2655-1
SDG: Eddy County NM

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

2

3

4

6

8

10

13

Definitions/Glossary

Job ID: 890-2655-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Qualifiers

GC VOA Qualifier

LCS and/or LCSD is outside acceptance limits, low biased.

*1 LCS/LCSD RPD exceeds control limits.

Qualifier Description

F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description**

U Indicates the analyte was analyzed for but not detected.

Glossary

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

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

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

Duplicate Error Ratio (normalized absolute difference) DER

Dil Fac Dilution Factor

Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

MDL Method Detection Limit ML Minimum Level (Dioxin)

MPN Most Probable Number MOI Method Quantitation Limit

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

PRES Presumptive **Quality Control** QC

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Job ID: 890-2655-1

Case Narrative

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Job ID: 890-2655-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2655-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-31414 and analytical batch 880-31453 was outside control limits. Sample matrix interference is suspected.

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

GC Semi VOA

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2655-1

Client Sample Results

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS04

Date Collected: 07/26/22 09:30 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1 F1 F2	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
Toluene	<0.00200	U F1 F2	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
Ethylbenzene	<0.00200	U F1 F2	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
m-Xylene & p-Xylene	<0.00401	U *- F1 F2	0.00401	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
o-Xylene	<0.00200	U F1	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:29	1
Xylenes, Total	<0.00401	U *- F1 F2	0.00401	mg/Kg		08/03/22 11:41	08/04/22 23:29	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			08/03/22 11:41	08/04/22 23:29	1
1,4-Difluorobenzene (Surr)	108		70 - 130			08/03/22 11:41	08/04/22 23:29	1
- Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/05/22 13:19	1
Method: 8015 NM - Diesel Range Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH			50.0	mg/Kg	— -	Prepared	07/31/22 10:38	DII Fac
- -								
Method: 8015B NM - Diesel Rang	no Organico (D							
	ge Organics (D	RO) (GC)						
	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Gasoline Range Organics		Qualifier		Unit mg/Kg	<u>D</u>	Prepared 07/29/22 08:50	Analyzed 07/31/22 03:21	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U			<u>D</u>	<u>·</u>		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result < 50.0	Qualifier U	50.0	mg/Kg	<u>D</u>	07/29/22 08:50	07/31/22 03:21	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 <50.0	Qualifier U U U	50.0	mg/Kg	<u>D</u>	07/29/22 08:50 07/29/22 08:50	07/31/22 03:21	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 <50.0 <50.0	Qualifier U U U	50.0 50.0 50.0	mg/Kg	<u>D</u>	07/29/22 08:50 07/29/22 08:50 07/29/22 08:50	07/31/22 03:21 07/31/22 03:21 07/31/22 03:21	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate	Result	Qualifier U U U	50.0 50.0 50.0 <i>Limits</i>	mg/Kg	<u> </u>	07/29/22 08:50 07/29/22 08:50 07/29/22 08:50 Prepared	07/31/22 03:21 07/31/22 03:21 07/31/22 03:21 Analyzed	Dil Fac
1-Chlorooctane	Result	Qualifier U U Qualifier	50.0 50.0 50.0 Limits 70 - 130	mg/Kg	<u>D</u>	07/29/22 08:50 07/29/22 08:50 07/29/22 08:50 Prepared 07/29/22 08:50	07/31/22 03:21 07/31/22 03:21 07/31/22 03:21 Analyzed 07/31/22 03:21	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U U Qualifier	50.0 50.0 50.0 Limits 70 - 130	mg/Kg	<u>D</u>	07/29/22 08:50 07/29/22 08:50 07/29/22 08:50 Prepared 07/29/22 08:50	07/31/22 03:21 07/31/22 03:21 07/31/22 03:21 Analyzed 07/31/22 03:21	Dil Fac

Surrogate Summary

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		2524	DED=4	Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2655-1	SS04	123	108	
890-2655-1 MS	SS04	98	102	
890-2655-1 MSD	SS04	111	102	
LCS 880-31414/1-A	Lab Control Sample	80	120	
LCSD 880-31414/2-A	Lab Control Sample Dup	81	107	
MB 880-31200/5-A	Method Blank	82	106	
MB 880-31414/5-A	Method Blank	83	105	

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

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2646-A-1-B MS	Matrix Spike	87	84	
890-2646-A-1-C MSD	Matrix Spike Duplicate	87	84	
890-2655-1	SS04	84	92	
LCS 880-30965/2-A	Lab Control Sample	101	102	
LCSD 880-30965/3-A	Lab Control Sample Dup	93	93	
MB 880-30965/1-A	Method Blank	91	101	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2655-1 SDG: Eddy County NM Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31200/5-A

Matrix: Solid

Analysis Batch: 31453

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31200

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		08/01/22 14:58	08/04/22 10:53	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared
4-Bromofluorobenzene (Surr)	82	70 - 130	08/01/22 14:58
1,4-Difluorobenzene (Surr)	106	70 - 130	08/01/22 14:58

3/01/22 14:58 08/04/22 10:53

Analyzed

08/04/22 10:53

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

Prep Batch: 31414

Matrix: Solid Analysis Batch: 31453

Lab Sample ID: MB 880-31414/5-A

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		08/03/22 11:41	08/04/22 23:07	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	08/03/22 11:41	08/04/22 23:07	1
1,4-Difluorobenzene (Surr)	105		70 - 130	08/03/22 11:41	08/04/22 23:07	1

Lab Sample ID: LCS 880-31414/1-A

Matrix: Solid

Analysis Batch: 31453

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

Client Sample ID: Lab Control Sample Dup

Prep Batch: 31414

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1214		mg/Kg		121	70 - 130	
Toluene	0.100	0.09865		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.09199		mg/Kg		92	70 - 130	
m-Xylene & p-Xylene	0.200	0.07945	*_	mg/Kg		40	70 - 130	
o-Xylene	0.100	0.08730		mg/Kg		87	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	80	70 - 130
1.4-Difluorobenzene (Surr)	120	70 - 130

Lab Sample ID: LCSD 880-31414/2-A

Matrix: Solid

Analysis Batch: 31453							Prep	Batch:	31414
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07448	*1	mg/Kg		74	70 - 130	48	35

Eurofins Carlsbad

Prep Type: Total/NA

Page 7 of 20

Dil Fac

Prep Batch: 31414

Client Sample ID: SS04

Client Sample ID: SS04

Prep Type: Total/NA

70 - 130

53

Prep Type: Total/NA

QC Sample Results

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31414/2-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31453

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.07311		mg/Kg		73	70 - 130	30	35
Ethylbenzene	0.100	0.07141		mg/Kg		71	70 - 130	25	35
m-Xylene & p-Xylene	0.200	0.06955	*_	mg/Kg		35	70 - 130	13	35
o-Xylene	0.100	0.07107		mg/Kg		71	70 - 130	21	35

LCSD LCSD %Recovery Qualifier Limits Surrogate 70 - 130 4-Bromofluorobenzene (Surr) 81 1,4-Difluorobenzene (Surr) 107 70 - 130

Lab Sample ID: 890-2655-1 MS

Matrix: Solid

								Prep E	Satch: 31414
Sample	Sample	Spike	MS	MS				%Rec	
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
<0.00200	U *1 F1	0.101	0.05843	F1	mg/Kg		58	70 - 130	
	F2								
<0.00200	U F1 F2	0.101	0.05184	F1	mg/Kg		52	70 - 130	
<0.00200	U F1 F2	0.101	0.05405	F1	mg/Kg		54	70 - 130	
<0.00401	U *- F1 F2	0.201	0.1046	F1	mg/Kg		52	70 - 130	
	Result <0.00200 <0.00200 <0.00200 <0.00200	Sample Result Qualifier	Result Qualifier Added <0.00200	Result Qualifier Added Added Result 0.00200 <0.00200	Result Qualifier Added Result Qualifier <0.00200	Result Qualifier Added Result Qualifier Unit <0.00200	Result Qualifier Added Added Result Qualifier Unit Unit Unit Unit Unit Unit Unit Unit	Result Qualifier Added Added Result Qualifier Unit Unit Unit Unit Unit Unit Unit Unit	Sample Sample Spike MS MS %Rec Result Qualifier Unit D %Rec Limits <0.00200

0.05325 F1

mg/Kg

0.101

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 98 70 - 130 1,4-Difluorobenzene (Surr) 102 70 - 130

<0.00200 UF1

Lab Sample ID: 890-2655-1 MSD

Matrix: Solid

o-Xylene

Analysis Batch: 31453									Prep	Batch:	31414
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U *1 F1 F2	0.0990	0.03449	F1 F2	mg/Kg		35	70 - 130	52	35
Toluene	<0.00200	U F1 F2	0.0990	0.03593	F1 F2	mg/Kg		36	70 - 130	36	35
Ethylbenzene	<0.00200	U F1 F2	0.0990	0.03345	F1 F2	mg/Kg		34	70 - 130	47	35
m-Xylene & p-Xylene	<0.00401	U *- F1 F2	0.198	0.07182	F1 F2	mg/Kg		36	70 - 130	37	35
o-Xylene	<0.00200	U F1	0.0990	0.03786	F1	mg/Kg		38	70 - 130	34	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Job ID: 890-2655-1

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-30965/1-A

Matrix: Solid Analysis Batch: 31053

Client Sample ID: Method Blank	
Prep Type: Total/NA	
Bron Botch, 20065	

Prep Batch: 30965

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:50	07/30/22 19:51	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	07/29/22 08:5	07/30/22 19:51	1
o-Terphenyl	101		70 - 130	07/29/22 08:5	50 07/30/22 19:51	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 30965

Matrix: Solid Analysis Batch: 31053

LCS LCS Spike %Rec Added Analyte Result Qualifier Unit D %Rec Limits 1058 Gasoline Range Organics 1000 mg/Kg 106 70 - 130 (GRO)-C6-C10 1000 1040 70 - 130 Diesel Range Organics (Over mg/Kg 104 C10-C28)

LCS LCS

l	Surrogate	%Recovery	Qualifier	Limits
	1-Chlorooctane	101		70 - 130
l	o-Terphenyl	102		70 - 130

Lab Sample ID: LCSD 880-30965/3-A Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Matrix: Solid

Lab Sample ID: LCS 880-30965/2-A

Analysis Batch: 31053

Prep Batch: 30965 Spike LCSD LCSD RPD %Rec Added %Rec Limit Analyte Result Qualifier Limits RPD Unit D Gasoline Range Organics 1000 949.7 mg/Kg 95 70 - 130 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 972.0 mg/Kg 97 70 - 130 20

C10-C28)

LCSD LCSD

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

Lab Sample ID: 890-2646-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 31053 Prep Batch: 30965

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	999	1211		mg/Kg		116	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	999	846.5		mg/Kg		85	70 - 130	
C10-C28)										

Job ID: 890-2655-1

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

MS MS

Lab Sample ID: 890-2646-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 31053

Prep Type: Total/NA

Prep Batch: 30965

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-2646-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Analysis Batch: 31053

Prep Type: Total/NA

Prep Batch: 30965

_	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	999	1295		mg/Kg		125	70 - 130	7	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	999	863.7		mg/Kg		86	70 - 130	2	20
C10-C28)											

MSD MSD Surrogate %Recovery Qualifier Limits 87 1-Chlorooctane

70 - 130 84 70 - 130 o-Terphenyl

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			07/30/22 22:01	1

Lab Sample ID: LCS 880-30913/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 31002

	Spike	LCS LCS				%Rec	
Analyte	Added	Result Qualifie	r Unit	D	%Rec	Limits	
Chloride	250	261.9	ma/Ka		105	90 - 110	

Lab Sample ID: LCSD 880-30913/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid**

Analysis Batch: 31002

	S	pike	LCSD	LCSD				%Rec		RPD
Analyte	Ac	lded	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride		250	267.7		mg/Kg		107	90 - 110	2	20

Lab Sample ID: 890-2653-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

Analysis Daten. 51002										
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4930		2500	7650		mg/Kg		109	90 - 110	

Eurofins Carlsbad

Prep Type: Soluble

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2655-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2653-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4930		2500	7677		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike **Matrix: Solid**

Prep Type: Soluble

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	149		250	378.1		mg/Kg		92	90 - 110	

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Soluble

Analysis Batch: 31002

MSD MSD %Rec RPD Sample Sample Spike Result Qualifier Limit Analyte Added Result Qualifier Unit Limits **RPD** Chloride 149 250 378.6 90 - 110 mg/Kg

QC Association Summary

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

GC VOA

Prep Batch: 31200	Prei	Bat	ch: 3	31200
-------------------	------	-----	-------	-------

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31200/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	5035	
MB 880-31414/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31414/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31414/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2655-1 MS	SS04	Total/NA	Solid	5035	
890-2655-1 MSD	SS04	Total/NA	Solid	5035	

Analysis Batch: 31453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	8021B	31414
MB 880-31200/5-A	Method Blank	Total/NA	Solid	8021B	31200
MB 880-31414/5-A	Method Blank	Total/NA	Solid	8021B	31414
LCS 880-31414/1-A	Lab Control Sample	Total/NA	Solid	8021B	31414
LCSD 880-31414/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31414
890-2655-1 MS	SS04	Total/NA	Solid	8021B	31414
890-2655-1 MSD	SS04	Total/NA	Solid	8021B	31414

Analysis Batch: 31592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30965

Lab Sample ID 890-2655-1	Client Sample ID SS04	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	8015B NM	30965
MB 880-30965/1-A	Method Blank	Total/NA	Solid	8015B NM	30965
LCS 880-30965/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30965
LCSD 880-30965/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30965
890-2646-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	30965
890-2646-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30965

Analysis Batch: 31124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2655-1

SDG: Eddy County NM

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2655-1	SS04	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

4

8

Q

10

40

13

Lab Chronicle

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS04

Lab Sample ID: 890-2655-1

Matrix: Solid

Date Collected: 07/26/22 09:30 Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	31414	08/03/22 11:41	MR	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31453	08/04/22 23:29	MR	EETSC MIE
Total/NA	Analysis	Total BTEX		1			31592	08/05/22 13:19	AJ	EETSC MIL
Total/NA	Analysis	8015 NM		1			31124	07/31/22 10:38	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30965	07/29/22 08:50	DM	EETSC MII
Total/NA	Analysis	8015B NM		1			31053	07/31/22 03:21	AJ	EETSC MII
Soluble	Leach	DI Leach			5 g	50 mL	30913	07/28/22 10:42	CH	EETSC MII
Soluble	Analysis	300.0		1			31002	07/30/22 23:43	SMC	EETSC MII

Laboratory References:

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

4

5

9

10

12

13

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2655-1
Project/Site: JRU 108H SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority		Program	Identification Number	Expiration Date	
Texas	N	NELAP	T104704400-22-24	06-30-23	
The following analytes the agency does not of	' '	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for whic	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		
Total BTEX		Solid	Total BTEX		

4

5

6

9

11

13

Method Summary

Client: Ensolum Project/Site: JRU 108H

JOD ID: 890-2655-1	
SDG: Eddy County NM	

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

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

Sample Summary

Client: Ensolum Project/Site: JRU 108H Job ID: 890-2655-1 SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2655-1	SS04	Solid	07/26/22 09:30	07/26/22 16:02	0.5

4

3

4

6

8

10

11

13

of in

City, State ZIP:

Company Name: Address:

3122 National Parks Hwy

Carlsbad, NM 88220

City, State ZIP:

Garrett Green

XTO Energy, Inc.

3104 E. Green Street

Carlsbad, NM 88220

Company Name: Address: Project Manager:

Ben Belill

Bill to: (if different)

Ensolum

Chain of Custody

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

Dreservative Codes	TOT
Deliverables: EDD	Deliverab
Reporting: Level III 🗍 Level III 🗎 PST/UST 🗍 TRRP 📗 Level IV 🛄	Reporting
roject:	State of Project:
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	Program
Work Order Comments	
www.xenco.com Page of	
1 1	
Work Order No:	

Phone: 9898	9898540852		Ema	Email: bbelill@ensolum.com	olum.cc						Deliverables: EDD L	ADaPI L	Other:
Project Name:	JRU 108H	08H	7 7	E A	Pres.					ANALYSIS RE	REQUEST	Pres	ervativ
Project Number:	03E1558090	8090	Routine	Rush	Code	-						None: NO	DI Water: H ₂ O
Project Location:	Eddy County, NM	nty, NM	Due Date:	5 day TAT	Ļ							Cool: Cool	
Sampler's Name:	Liz Cheli	heli	TAT starts	he d	<u>×</u>]					_		HCL: HC	HNO3: HN
PO#	N/A	1	the lab, if r	the lab, if received by 4:30pm								H ₂ S0 ₄ : H ₂	NaOH: Na
SAMPLE RECEIPT	Temp Blank:	ik: Yes) No	No Wet ice:	Yes No	nete	0)						H₃PO₄: HP	U
Samples Received Intact:	Kes No		南		Ш	300.						NaHSO ₄ : NABIS	NABIS
Cooler Custody Seals:	-	别	Correction Factor:	0		PA: :						Na ₂ S ₂ O ₃ : NaSO ₃	NaSO ₃
Sample Custody Seals:	8		Temperature Reading:			(EF				890-2655 C	890-2655 Chain of Custody	Zn Acetate	Zn Acetate+NaOH: Zn
Total Containers:		\rightarrow	Corrected Temperature:	d		DES	15)	021		-	- - -	NaOH+As	NaOH+Ascorbic Acid: SAPC
Sample Identification		Matrix Sampled	ed Sampled	Depth Grab/	b/ # of Cont	CHLOR	TPH (80	BTEX (8				Sam	Sample Comments
SS04	S	7/26/2022	022 930	0.5 Comp	ည် 1	×	×	×				Incident I	Incident ID: nAPP2217931599
					+							Cost Cen	Cost Center: 1139071001
					+								
						11							
Total 200.7 / 6010	200.8 / 6020:		8RCRA 13PPM	3PPM Texas 11 Al Sb	1 2 ≥	Sb As	Ba	Ba Be B Cd Ca		. "	K Se /	SiO ₂ Na Sr TI S	3n U V Z
Circle Method(s) and Metal(s) to be all alyzed	(al(s) to be a	ilaiyzed	1017	ICEP / SPEP BOILD BYCKS	3	90	ON AS DO DE	De Co	Ca Ci Co Ca Fo Mili		MO M SE AS 11 O	19. 100 17 E TO: 1 1 1 1 1 0 1 1 1 1 1	
Notice: Signature of this documer of service. Eurofins Xenco will be of Eurofins Xenco. A minimum ch	nt and relinquish e liable only for tl harge of \$85.00 w	ment of sample he cost of samp vill be applied to	s constitutes a vali les and shall not as each project and a	d purchase order fr sume any respons charge of \$5 for ea	om client ibility for ach sampl	compan any loss le submit	y to Euro es or exp ted to E	ofins Xen penses in profins X	co, Its affiliates a curred by the cil enco, but not an	ind subcontractors ent if such losses alyzed. These term	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from cilent 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 cilent if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	nditions e control r negotiated.	
Relinquished by Signature)	hatuge)	A Rec	Received by: (Signature	ature)		Date	Date/Time		Relinquished by: (Si		gnature) Received by: (Signature)	(Signature)	Date/Time
1		() [UZ	all		7	7.26.22	थ्र	(60g)					
3 / 1		(1					4					
5								6				Rev	Revised Date: 08/25/2020 Rev. 2020 2
												Rev	vised Date: 08/25/

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2655-1

SDG Number: Eddy County NM

List Source: Eurofins Carlsbad

Login Number: 2655 List Number: 1 Creator: Clifton, Cloe

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

92 0J 432

4

6

8

10

12

13

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2655-1

SDG Number: Eddy County NM

Login Number: 2655 **List Source: Eurofins Midland** List Number: 2

List Creation: 07/28/22 10:13 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2656-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/4/2022 10:57:48 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Laboratory Job ID: 890-2656-1
Project/Site: JRU 108H
SDG: 03E1558090

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

3

-+

6

8

10

12

13

Definitions/Glossary

Job ID: 890-2656-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC VOA

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

*1 LCS/LCSD 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. 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 Contains No Free Liquid **CNF**

Duplicate Error Ratio (normalized absolute difference) DER

Dil Fac Dilution Factor

Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

PRES Presumptive **Quality Control** QC

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Case Narrative

Job ID: 890-2656-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Job ID: 890-2656-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2656-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30966 and analytical batch 880-31081 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30966/2-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2656-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: SS05

Date Collected: 07/26/22 09:25 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15	1
Toluene	< 0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15	•
Ethylbenzene	< 0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:15	1
o-Xylene	< 0.00199	U *+ *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:15	1
Xylenes, Total	<0.00398	U *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			08/02/22 14:44	08/03/22 22:15	1
1,4-Difluorobenzene (Surr)	96		70 - 130			08/02/22 14:44	08/03/22 22:15	1
Method: Total BTEX - Total B	TEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/04/22 09:41	1
Method: 8015 NM - Diesel Rar	ngo Organice (DP	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	62.8		49.8	mg/Kg			08/01/22 15:09	1
Method: 8015B NM - Diesel R	ange Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		07/29/22 08:55	07/31/22 13:23	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		07/29/22 08:55	07/31/22 13:23	1
Oll Range Organics (Over C28-C36)	62.8		49.8	mg/Kg		07/29/22 08:55	07/31/22 13:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130			07/29/22 08:55	07/31/22 13:23	1
o-Terphenyl	121		70 - 130			07/29/22 08:55	07/31/22 13:23	1
Method: 300.0 - Anions, Ion C	hromatography -	Soluble						
mountain value 7 millionio, nom o								
Analyte	0	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Surrogate Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2656-1	SS05	106	96	
890-2656-1 MS	SS05	104	96	
890-2656-1 MSD	SS05	106	93	
LCS 880-31337/1-A	Lab Control Sample	113	93	
LCSD 880-31337/2-A	Lab Control Sample Dup	90	87	
MB 880-31323/5-A	Method Blank	106	87	
MB 880-31337/5-A	Method Blank	99	87	

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

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2654-A-1-C MS	Matrix Spike	102	110	
890-2654-A-1-D MSD	Matrix Spike Duplicate	99	106	
890-2656-1	SS05	97	121	
LCS 880-30966/2-A	Lab Control Sample	123	137 S1+	
LCSD 880-30966/3-A	Lab Control Sample Dup	107	121	
MB 880-30966/1-A	Method Blank	106	138 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31323

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

MB MB

MR MR

<0.00200 U

<0.00200 U

<0.00200 U

<0.00400 U

Result Qualifier

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	_	08/02/22 13:15	08/03/22 10:46	1
1,4-Difluorobenzene (Surr)	87		70 - 130		08/02/22 13:15	08/03/22 10:46	1

Lab Sample ID: MB 880-31337/5-A

Matrix: Solid

Analyte

Benzene

Toluene

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 31375

Client Sample ID: Method Blank

Analyzed

Prep Type: Total/NA

Prep Batch: 31337

Dil Fac

mg/Kg 08/02/22 14:44 08/03/22 21:53 mg/Kg 08/02/22 14:44 08/03/22 21:53 mg/Kg 08/02/22 14:44 08/03/22 21:53 08/02/22 14:44 08/03/22 21:53 mg/Kg

Prepared

<0.00200 U 08/02/22 14:44 08/03/22 21:53 o-Xylene 0.00200 mg/Kg Xylenes, Total <0.00400 U 0.00400 08/02/22 14:44 08/03/22 21:53 mg/Kg MB MB

RL

0.00200

0.00200

0.00200

0.00400

Unit

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 14:4	08/03/22 21:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 14:4	4 08/03/22 21:53	1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 31337

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09999 mg/Kg 100 70 - 130 Toluene 0.100 0.1031 mg/Kg 103 70 - 130 Ethylbenzene 0.100 0.1082 mg/Kg 108 70 - 130 0.200 m-Xylene & p-Xylene 0.2220 mg/Kg 111 70 - 130 70 - 130 0.100 0.1387 *+ o-Xylene mg/Kg 139

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1.4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31337

	Spike		LCSD				70 Rec		KPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.0998	0.05262	*- *1	mg/Kg		53	70 - 130	62	35	

LCCD LCCD

Chiles

QC Sample Results

Client: Ensolum Job ID: 890-2656-1 SDG: 03E1558090 Project/Site: JRU 108H

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

Lab Sample ID: LCSD 880-31337/2-A **Matrix: Solid**

Analysis Batch: 31375

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 31337

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.0998	0.06071	*- *1	mg/Kg		61	70 - 130	52	35
Ethylbenzene	0.0998	0.06794	*- *1	mg/Kg		68	70 - 130	46	35
m-Xylene & p-Xylene	0.200	0.1297	*- *1	mg/Kg		65	70 - 130	52	35
o-Xylene	0.0998	0.09111	*1	mg/Kg		91	70 - 130	41	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1,4-Difluorobenzene (Surr)	87	70 - 130

Lab Sample ID: 890-2656-1 MS

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: SS05 Prep Type: Total/NA

Prep Batch: 31337

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U *- *1	0.101	0.08722		mg/Kg		87	70 - 130	
Toluene	<0.00199	U *- *1	0.101	0.08202		mg/Kg		82	70 - 130	
Ethylbenzene	<0.00199	U *- *1	0.101	0.08158		mg/Kg		81	70 - 130	
m-Xylene & p-Xylene	<0.00398	U *- *1	0.201	0.1625		mg/Kg		81	70 - 130	
o-Xylene	<0.00199	U *+ *1	0.101	0.09304		mg/Kg		92	70 - 130	

MS MS

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

Lab Sample ID: 890-2656-1 MSD

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: SS05

Prep Type: Total/NA

Prep Batch: 31337

7											• . • • .
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	<0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

MSD MSD

Surrogate	%Recovery	Quaimer	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-30966/1-A

Matrix: Solid

Analysis Batch: 31081

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

Prep Batch: 30966

мв мв Result Qualifier Unit Prepared <50.0 U 50.0 mg/Kg 07/29/22 08:55 07/31/22 10:35 Gasoline Range Organics

(GRO)-C6-C10

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-30966/1-A

Matrix: Solid

Analysis Batch: 31081

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30966

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130			07/29/22 08:55	07/31/22 10:35	1
o-Terphenyl	138	S1+	70 - 130			07/29/22 08:55	07/31/22 10:35	1

Lab Sample ID: LCS 880-30	966/2-A						Client	Sample	ID: Lab Control	Sampl
Matrix: Solid									Prep Type: T	otal/N
Analysis Batch: 31081									Prep Batch	ı: <mark>3096</mark>
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	1127		mg/Kg		113	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	1195		mg/Kg		120	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	123		70 - 130							
o-Terphenyl	137	S1+	70 - 130							

Lab Sample ID: LCSD 880-30966/3-A Matrix: Solid Analysis Batch: 31081				Clier	nt Sam	ple ID: I		ol Sample Type: Total 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	1048		mg/Kg		105	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	1000	1111		mg/Kg		111	70 - 130	7	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	121		70 - 130

102

110

Lab Sample ID: 890-2654-A-1-C MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 31081 Prep Batch: 30966 MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <49.9 U 999 108 70 - 130 1120 mg/Kg (GRO)-C6-C10 <49.9 U 999 993.9 96 70 - 130 Diesel Range Organics (Over mg/Kg C10-C28) MS MS Surrogate %Recovery Qualifier Limits

Eurofins Carlsbad

70 - 130

70 - 130

1-Chlorooctane

o-Terphenyl

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-2654-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 31081 Prep Type: Total/NA Prep Batch: 30966

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1143		mg/Kg		111	70 - 130	2	20
Diesel Range Organics (Over	<49.9	U	999	989.3		mg/Kg		96	70 - 130	0	20

C10-C28)

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	106		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank

Matrix: Solid Prep Type: Soluble

Analysis Batch: 31002

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			07/30/22 22:01	1

Lab Sample ID: LCS 880-30913/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	261.9		mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30913/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	267.7		mg/Kg		107	90 - 110	2	20	

Lab Sample ID: 890-2653-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4930		2500	7650		ma/Ka	_	109	90 110	

Lab Sample ID: 890-2653-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31002

Analysis Daten. 51002											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4930		2500	7677		mg/Kg		110	90 - 110	0	20

Eurofins Carlsbad

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	149		250	378.1		mg/Kg		92	90 - 110	

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate Matrix: Solid **Prep Type: Soluble**

Analysis Batch: 31002

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	149		250	378.6		mg/Kg		92	90 - 110	0	20

QC Association Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 31323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-1 MS	SS05	Total/NA	Solid	5035	
890-2656-1 MSD	SS05	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-1 MS	SS05	Total/NA	Solid	8021B	31337
890-2656-1 MSD	SS05	Total/NA	Solid	8021B	31337

Analysis Batch: 31477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	Total BTEX	-

GC Semi VOA

Prep Batch: 30966

Lab Sample ID 890-2656-1	Client Sample ID SS05	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	8015B NM	30966
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015B NM	30966
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30966
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30966
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30966
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30966

Analysis Batch: 31203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2656-1	SS05	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

Eurofins Carlsbad

9

4

6

8

Q

10

13

Date Received: 07/26/22 16:02

Lab Chronicle

Client: Ensolum Job ID: 890-2656-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: SS05 Lab Sample ID: 890-2656-1 Date Collected: 07/26/22 09:25

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	31337	08/02/22 14:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31375	08/03/22 22:15	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31477	08/04/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31203	08/01/22 15:09	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30966	07/29/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31081	07/31/22 13:23	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30913	07/28/22 10:42	CH	XEN MID
Soluble	Analysis	300.0		1			31002	07/30/22 23:51	SMC	XEN MID

Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 3/11/2024 11:17:01 AM

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	t the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for w
the agency does not of	• •		ed by the governing additionty. This list the	ay include analytes for v
the agency does not of Analysis Method	• •	Matrix	Analyte	ay include analytes for v
0 ,	fer certification.	•	, , ,	

3

4

5

7

3

11

12

Method Summary

 Client: Ensolum
 Job ID: 890-2656-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Protocol References:

DI Leach

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

Deionized Water Leaching Procedure

Laboratory References:

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

__

5

7

XEN MID

ASTM

_

10

11

13

14

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2656-1 SDG: 03E1558090

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Depth

 890-2656-1
 SS05
 Solid
 07/26/22 09:25
 07/26/22 16:02
 0.5

1

3

А

5

7

10

12

13

14

eurofins:

Phone:

9898540852 Carlsbad, NM 88220 3122 National Parks Hwy

Email: bbelill@ensolum.com

City, State ZIP:

Carlsbad, NM 88220 3104 E. Green Street XTO Energy, Inc.

Company Name: Bill to: (if different)

Garrett Green

Address:

City, State ZIP:

Address: Company Name: Project Manager:

Ensolum Ben Belill

Project Name:

03E1558090 JRU 108H

☑ Routine

Rush

Turn Around

ANALYSIS REQUEST

None: NO

DI Water: H₂O

Preservative Codes

Chain of Custody

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

	Work Order No:
	_
	www.xenco.com Page ofof
	Work Order Comments
	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	State of Project:
\perp	Reporting: Level II Level III PST/UST TRRP Level IV
	Deliverables: EDD ☐ ADaPT ☐ Other:

Revised Date: 08/25/2020 Rev. 2020 2	Rev		6								Ch
			4				1				3
			(५००)	CG. 76.	6.1		W)	1000	1	1	
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	70	Date/Time	D.	re)	Received by: (Signature)	Received	е)	(Signature)	Relinguished by
	ctors. It assigns standard terms and conditions uses are due to circumstances beyond the control terms will be enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiat	ofins Xenco, I penses incun urofins Xenco	pany to Euro osses or exp bmitted to Eu	client com ty for any i sample su	rchase order from le any responsibili rge of \$5 for each	titutes a valid pur d shall not assum project and a cha	of samples cons it of samples an applied to each	relinquishment only for the cos of \$85.00 will be	document and to will be liable firmum charge	Notice: Signature of this of service. Eurofins Xenu of Eurofins Xenco. A mir
470 / /4/1	g TI U Hg: 1631 / 245.1 / 7470 / 7471	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Be Cd C	As Ba	CRA SI	LP 6010: 8R	TCLP / SPI	zed	to be analy:	nd Metal(s)	Circle Method(s) and Metal(s) to be analyzed
in U V Zn	K Se A		Be B Cd	As Ba I	Al Sb As	M Texas 11	8RCRA 13PPM	8	200.8 / 6020:	- 1	Total 200.7 / 6010
					-						
					-						
Cost Center: 1139071001	Cost Cen										
Incident ID: nAPP2217931599	Incident I		×	×	1	0.5 Comp	925	7/26/2022	S	ζī.	SS05
Sample Comments	Sam		BTEX	TPH (8		Depth Grab/ # of Cont	Time I	Date Sampled	Matrix	tification	Sample Identification
NaOH+Ascorbic Acid: SAPC	NaCH+As		802	_		J.	mperature:	Corrected Temperature:			Total Containers:
Zn Acetate+NaOH: Zn	Zn Acetate		1	H		7.7	Reading:	Temperature Reading:	No N/A	ls: Yes	Sample Custody Seals:
NaSO ₃	Na ₂ S ₂ O ₃ : NaSO ₃	890-2656 Chain of Custody		PA:	_	0.0	actor:	Correction Factor:	NO NIA	s: Yes	Cooler Custody Seals:
NABIS				300		TOO W	1	Thermometer ID:	Yes No		Samples Received Intact:
0	H ₃ PO ₄ : HP			.0)	nete	Yes) No	Wet Ice:	tes No	Lemp Blank:	١.	SAMPLE RECEIPT
NaOH: Na	H ₂ S0 ₄ : H ₂				rs	red by 4:30pm	the lab, if received by 4:30pm)	N/A		PO#:
HNO ₃ : HN	HCL: HC					lay received by	TAT starts the day received by		Liz Cheli		Sampler's Name:
	Cool: Cool					5 day TAT	Due Date:		Eddy County, NM	Ę	Project Location:
DI Water. n20	None: NO				Code	Rush	✓ Routine		03E1558090		Project Number:

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2656-1 SDG Number: 03E1558090

Login Number: 2656 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2656-1 SDG Number: 03E1558090

Login Number: 2656
List Source: Eurofins Midland
List Number: 2
List Creation: 07/28/22 10:13 AM

Creator: Rodriguez, Leticia

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

4

3

4

6

8

10

10

13

14

<6mm (1/4").

Released to Imaging: 3/11/2024 11:17:01 AM

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2657-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/4/2022 10:57:48 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-2657-1
SDG: Eddy County NM

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

3

4

6

8

10

11

13

14

Definitions/Glossary

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

M 2

Qualifiers

GC	VOA
Qua	lifier

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

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

HPLC/IC

U Indicates the analyte was analyzed for but not detected.

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

Negative / Absent

Positive / Present
Practical Quantitation Limit

Presumptive Quality Control

Method 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)

Glossary

DLC

EDL

LOD

LOQ

MCL

MDA

MDC

MDL

MPN

MQL

NC

ND

NEG

POS

PQL PRES

QC RER

RL

RPD

TEF TEQ

TNTC

ML

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

Case Narrative

Job ID: 890-2657-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Job ID: 890-2657-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2657-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30966 and analytical batch 880-31081 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30966/2-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2657-1

Client Sample Results

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS06

Date Collected: 07/26/22 09:32 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Toluene	< 0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Ethylbenzene	< 0.00199	U *- *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
o-Xylene	< 0.00199	U *+ *1	0.00199	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Xylenes, Total	<0.00398	U *1	0.00398	mg/Kg		08/02/22 14:44	08/03/22 22:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			08/02/22 14:44	08/03/22 22:56	1
1,4-Difluorobenzene (Surr)	92		70 - 130			08/02/22 14:44	08/03/22 22:56	1
- Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/04/22 09:41	1
Method: 8015 NM - Diesel Range Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	Result <50.0		50.0	<u>Unit</u> mg/Kg	— —	Prepared	08/01/22 15:09	DII Fac
Method: 8015B NM - Diesel Rang	ge 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		07/29/22 08:55	07/31/22 13:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 13:44	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 13:44	1
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Surrogate						07/29/22 08:55	07/31/22 13:44	
	95		70 - 130			01720722 00.00	07/31/22 13.44	
1-Chlorooctane			70 ₋ 130 70 ₋ 130			07/29/22 08:55	07/31/22 13:44	1
1-Chlorooctane o-Terphenyl	95 117	Soluble						1
1-Chlorooctane	95 117 omatography -	Soluble Qualifier		Unit	D			Dil Fac

Surrogate Summary

Client: Ensolum Job ID: 890-2657-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2656-A-1-F MS	Matrix Spike	104	96	
890-2656-A-1-G MSD	Matrix Spike Duplicate	106	93	
890-2657-1	SS06	107	92	
LCS 880-31337/1-A	Lab Control Sample	113	93	
LCSD 880-31337/2-A	Lab Control Sample Dup	90	87	
MB 880-31323/5-A	Method Blank	106	87	
MB 880-31337/5-A	Method Blank	99	87	

DFBZ = 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Range Organics (DRO) (GC)

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

_			
		1001	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2654-A-1-C MS	Matrix Spike	102	110
890-2654-A-1-D MSD	Matrix Spike Duplicate	99	106
890-2657-1	SS06	95	117
LCS 880-30966/2-A	Lab Control Sample	123	137 S1+
LCSD 880-30966/3-A	Lab Control Sample Dup	107	121
MB 880-30966/1-A	Method Blank	106	138 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			

Eurofins Carlsbad

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2657-1 SDG: Eddy County NM Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31323

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	
4-Bromofluorobenzene (Surr)	106		70 - 130	
1,4-Difluorobenzene (Surr)	87		70 - 130	

Prepared Dil Fac Analyzed 08/02/22 13:15 08/03/22 10:46 08/02/22 13:15 08/03/22 10:46

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31337

Lab Sample ID: MB 880-31337/5-A

Matrix: Solid

Analysis Batch: 31375

Analyte Benzene Toluene Ethylbenzene m.Xylene & n.Xylene		MB	MB						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
	Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 14:-	08/03/22 21:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 14:-	14 08/03/22 21:53	1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

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

Prep Batch: 31337

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09999		mg/Kg		100	70 - 130	
Toluene	0.100	0.1031		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.1082		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.2220		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1387	*+	mg/Kg		139	70 - 130	

LCS LCS

Surrogate	%Recovery Qual	lifier Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID	: Lab Control Sample Dup
	Duny Towns Total/NIA

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LUSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0998	0.05262	*- *1	mg/Kg		53	70 - 130	62	35

QC Sample Results

Client: Ensolum Job ID: 890-2657-1 Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31337/2-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 31375** Prep Batch: 31337

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.0998	0.06071	*- *1	mg/Kg		61	70 - 130	52	35
Ethylbenzene	0.0998	0.06794	*- *1	mg/Kg		68	70 - 130	46	35
m-Xylene & p-Xylene	0.200	0.1297	*- *1	mg/Kg		65	70 - 130	52	35
o-Xylene	0.0998	0.09111	*1	mg/Kg		91	70 - 130	41	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

Lab Sample ID: 890-2656-A-1-F MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31375 Prep Batch: 31337

ample Sa	ample	Spike	MS	MS				%Rec
Result Q	ualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
.00199 U	J *- *1	0.101	0.08722		mg/Kg	_	87	70 - 130
.00199 U	I *- *1	0.101	0.08202		mg/Kg		82	70 - 130
.00199 U	J *- *1	0.101	0.08158		mg/Kg		81	70 - 130
.00398 U	J *- *1	0.201	0.1625		mg/Kg		81	70 - 130
.00199 U	J *+ *1	0.101	0.09304		mg/Kg		92	70 - 130
1. 1.	Result 0.00199 U.00199 U.00199 U.00398 U	Result Qualifier .00199 U*-*1 .00199 U*-*1 .00398 U*-*1 .00199 U*+*1	Result Qualifier Added .00199 U *- *1 0.101 .00199 U *- *1 0.101 .00199 U *- *1 0.101 .00398 U *- *1 0.201	Result Qualifier Added Result .00199 U *- *1 0.101 0.08722 .00199 U *- *1 0.101 0.08202 .00199 U *- *1 0.101 0.08158 .00398 U *- *1 0.201 0.1625	Result Qualifier Added Result Qualifier .00199 U *- *1 0.101 0.08722 .00199 U *- *1 0.101 0.08202 .00199 U *- *1 0.101 0.08158 .00398 U *- *1 0.201 0.1625	Result Qualifier Added Result Qualifier Unit .00199 U*-*1 0.101 0.08722 mg/Kg .00199 U*-*1 0.101 0.08202 mg/Kg .00199 U*-*1 0.101 0.08158 mg/Kg .00398 U*-*1 0.201 0.1625 mg/Kg	Result Qualifier Added Result Qualifier Unit D .00199 U *- *1 0.101 0.08722 mg/Kg .00199 U *- *1 0.101 0.08202 mg/Kg .00199 U *- *1 0.101 0.08158 mg/Kg .00398 U *- *1 0.201 0.1625 mg/Kg	Result Qualifier Added Result Qualifier Unit D %Rec .00199 U*-*1 0.101 0.08722 mg/Kg 87 .00199 U*-*1 0.101 0.08202 mg/Kg 82 .00199 U*-*1 0.101 0.08158 mg/Kg 81 .00398 U*-*1 0.201 0.1625 mg/Kg 81

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

Lab Sample ID: 890-2656-A-1-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 31375** Prep Batch: 31337

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	<0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-30966/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31081 Prep Batch: 30966 мв мв

Result Qualifier Unit Prepared <50.0 U 50.0 mg/Kg 07/29/22 08:55 07/31/22 10:35 Gasoline Range Organics (GRO)-C6-C10

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-30966/1-A

Matrix: Solid

Analysis Batch: 31081

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30966

	IVID						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
МВ	MB						
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
106		70 - 130			07/29/22 08:55	07/31/22 10:35	1
138	S1+	70 - 130			07/29/22 08:55	07/31/22 10:35	1
	Result	MB MB Qualifier U	Result Qualifier RL	Result Qualifier RL Unit mg/Kg	Result Qualifier RL Unit D mg/Kg	Result Qualifier RL Unit D Prepared <50.0	Result Qualifier RL State Unit Unit Unit Unit Unit Unit Unit Unit

Lab Sample ID: LCS 880-30966/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 31081** Prep Batch: 30966 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1127 113 70 - 130 mg/Kg (GRO)-C6-C10 1000 1195 Diesel Range Organics (Over mg/Kg 120 70 - 130 C10-C28) LCS LCS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 123 137 S1+ o-Terphenyl 70 - 130

Lab Sample ID: LCSD 880-30966/3-A

Matrix: Solid

Analysis Batch: 31081

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30966

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1048		mg/Kg		105	70 - 130	7	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1111		mg/Kg		111	70 - 130	7	20
C10-C28)									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	121		70 - 130

110

Lab Sample ID: 890-2654-A-1-C MS

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 31081

Prep Batch: 30966

Sample Sa

•	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1120		mg/Kg		108	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	999	993.9		mg/Kg		96	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	102		70 - 130							

Eurofins Carlsbad

70 - 130

o-Terphenyl

Lab Sample ID: 890-2654-A-1-D MSD

Job ID: 890-2657-1

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30966

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	999	1143		mg/Kg		111	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	999	989.3		mg/Kg		96	70 - 130	0	20

C10-C28)

Matrix: Solid

Analysis Batch: 31081

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	106		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

мв мв

	Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	<5.00 U	5.00	mg/Kg			07/30/22 22:01	1

Lab Sample ID: LCS 880-30913/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	261.9	-	mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30913/3-A

Matrix: Solid

Analysis Batch: 31002

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	267.7		ma/Ka		107	90 - 110	2	20	

Lab Sample ID: 890-2653-A-1-B MS

Matrix: Solid

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4930		2500	7650		ma/Ka		109	90 - 110	

Lab Sample ID: 890-2653-A-1-C MSD

Matrix: Solid

Analysis Ratch: 31002

Alialysis Batch: 51002											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4930		2500	7677		mg/Kg		110	90 - 110	0	20

Eurofins Carlsbad

Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2657-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2659-A-1-B MS Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	149		250	378.1		mg/Kg		92	90 - 110	

Lab Sample ID: 890-2659-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid**

Prep Type: Soluble

Analysis Batch: 31002

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	149		250	378.6		mg/Kg		92	90 - 110	0	20

QC Association Summary

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

GC VOA

Prep Batch: 31323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	31337
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31337

Analysis Batch: 31479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	8015NM Prep	·
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	8015B NM	30966
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015B NM	30966
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30966
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30966
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30966
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30966

Analysis Batch: 31204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2657-1

SDG: Eddy County NM

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2657-1	SS06	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

6

3

5

7

9

11

12

12

Date Received: 07/26/22 16:02

Lab Chronicle

Client: Ensolum Job ID: 890-2657-1 Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS06 Lab Sample ID: 890-2657-1 Date Collected: 07/26/22 09:32

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31337	08/02/22 14:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31375	08/03/22 22:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31479	08/04/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31204	08/01/22 15:09	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30966	07/29/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31081	07/31/22 13:44	SM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30913	07/28/22 10:42	CH	XEN MID
Soluble	Analysis	300.0		1			31002	07/30/22 23:59	SMC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2657-1
Project/Site: JRU 108H SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	it the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for w
the agency does not of	fer certification.	,	ou s, and governmig dualismy.	ay molado analytoo for v
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	ay morado anarytoo tor v
9 ,		•	, , ,	

3

4

0

9

44

13

14

Method Summary

Joh ID: 890-2657-1 Client: Ensolum Project/Site: JRU 108H

JUD ID. 090-2037-1	
SDG: Eddy County NM	

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

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 3/11/2024 11:17:01 AM

Sample Summary

Client: Ensolum Project/Site: JRU 108H Job ID: 890-2657-1

SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2657-1	SS06	Solid	07/26/22 09:32	07/26/22 16:02	0.5

Environment Testi Xenco

eurofins

Project Manager:

Ben Belill Ensolum

Company Name:
Address:
City, State ZIP:

3122 National Parks Hwy Carlsbad, NM 88220

Address: City, State ZIP:

Garrett Green

XTO Energy, Inc.

3104 E. Green Street

Carlsbad, NM 88220

Bill to: (if different)
Company Name:

Chain of Custody TX (281) 240-4200, Dallas, TX (214) 90

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

Work Order No:

94-1296 88-3199		_	_
	www.xenco.com	Page	of
	Work Order Comments	mments	
Pro	Program: UST/PST 🗌 PRP 🗌 Brownfields 📗 RRC 📗 Superfund 🗎	elds 🗌 RRC 🔲 t	Superfund []
Sta	State of Project:		
Rej	Reporting: Level II Level III PST/UST TRRP Level IV	JST 🗌 TRRP 📗	Level IV
Del	Deliverables: EDD	Other:	

Revised Date 08/25/2020 Rev 2020 2	R	6								
		400	Ja 2 16	30		1	And Charles	7		
Date/Time	Received by: (Signature)	Relinquished by: (Signature)		Date	ire)	Received by: (Signature)	Received	re)	Relinquietted by: (Signature)	Relingu
	tandard terms and conditions sumstances beyond the control ced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	y to Eurofins X es or expenses tted to Eurofins	ent compar for any loss mple submi	rchase order from cli le any responsibility rge of \$5 for each sa	titutes a valid pu d shall not assum project and a cha	of samples cons st of samples an applied to each	relinquishment e only for the co of \$85.00 will be	ure of this document an rofins Xenco will be liab nco. A minimum charge	ice: Signat ervice. Eu urofins Xe
Sn U V Zn 7470 / 7471	Mn Mo Ni K Se Ag SiO ₂ Na Sr II Sn U V zn ie Ag TI U Hg: 1631/245.1/7470/7471	Cd Ca Cr Co Cu Fe Pb Mg Cd Cr Co Cu Pb Mn Mo Ni S	s Ba Be B	Al Sb As	M Texas 11 Al Sb LP 6010: 8RCRA St	8RCRA 13PPM TCLP / SPLP		200.8 / 6020: al(s) to be analy	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	Total 2 cle Meth
2			-		-					
				-						
				+						
Cost Center: 1139071001	Cost Ce									
Incident ID: nAPP2217931599	Incident		×	×	0.5 Comp	932	7/26/2022	S	SS06	
Sample Comments	Sai		TPH (CHLC	Depth Comp C	Time Sampled	Sampled	Matrix	Sample Identification	San
NaOn+Ascorbic Acid. SAFC	Naconta					imperature:	Corrected Temperature:		iners:	Total Containers:
Zn Acetate+NaOH: Zn		890-2657 Chain of Custody	-	S (E	7	Reading:	Temperature Reading:	NO NIA	Sample Custody Seals: Yes	mple Cus
NasC ₃					0.0	actor:	Correction Factor:	No X	Cooler Custody Seals: Yes	oler Cust
NABIS	NaHSO ₄ : NABIS				10m. BB	Ë	Thermometer ID:	Yes) No	Samples Received Intact:	mples Re
+	H ₃ PO ₄ : HP			nete .0)	Yes) No	Wet Ice:	(Yes No	emp Blank:	SAMPLE RECEIPT J	MPLE
NaOH: Na	H ₂ S0 ₄ : H ₂			ers	_	the lab, if received by 4:30pm)	N/A		PO#:
	I I I HCL: HC				lay received by	TAT starts the day received by		Liz Cheli	lame:	Sampler's Name:
	Cool: Cool				5 day TAT	Due Date:		Eddy County, NM		Project Location
O DI Water: H ₂ O	None: NO			Code	Rush C	☑ Routine	0	03E1558090	nber:	Project Number
Preservative Codes	Fre	ANALYSIS REQUEST				Turn Around		JRU 108H	ne:	Project Name:

Page 18 of 20

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2657-1

SDG Number: Eddy County NM

List Source: Eurofins Carlsbad

Login Number: 2657 List Number: 1 Creator: Clifton, Cloe

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

102 oj 702

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2657-1 SDG Number: Eddy County NM

List Source: Eurofins Midland

Login Number: 2657 List Number: 2 List Creation: 07/28/22 10:13 AM Creator: Rodriguez, Leticia

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

Released to Imaging: 3/11/2024 11:17:01 AM



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 3/11/2024 11:17:01 AM

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2658-1

Laboratory Sample Delivery Group: Eddy County NM

Client Project/Site: JRU 108H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

RAMER

Authorized for release by: 8/4/2022 11:03:25 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-2658-1
SDG: Eddy County NM

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Racaint Chacklists	19

3

6

8

10

11

13

14

Definitions/Glossary

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD 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.							
n	Listed under the "D" column to designate that the result is reported on a dry weight basis							
%R	Percent Recovery							
CFL	Contains Free Liquid							
CFU	Colony Forming Unit							
CNF	Contains No Free Liquid							
DER	Duplicate Error Ratio (normalized absolute difference)							
Dil Fac	Dilution Factor							
DL	Detection Limit (DoD/DOE)							
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample							
DLC	Decision Level Concentration (Radiochemistry)							

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

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

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

NC Not Calculated

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

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

PRES Presumptive **Quality Control** QC

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Job ID: 890-2658-1

Case Narrative

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

Job ID: 890-2658-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2658-1

Receipt

The sample was received on 7/26/2022 4:02 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 4.2°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31337 and analytical batch 880-31375 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-30966 and analytical batch 880-31081 was outside the upper control limits.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-30966/2-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC

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

Matrix: Solid

Lab Sample ID: 890-2658-1

Client Sample Results

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2658-1

SDG: Eddy County NM

Client Sample ID: SS07

Date Collected: 07/26/22 09:35 Date Received: 07/26/22 16:02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	
Toluene	<0.00200	U *- *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	•
Ethylbenzene	<0.00200	U *- *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	•
m-Xylene & p-Xylene	<0.00401	U *- *1	0.00401	mg/Kg		08/02/22 14:44	08/03/22 23:16	
o-Xylene	<0.00200	U *+ *1	0.00200	mg/Kg		08/02/22 14:44	08/03/22 23:16	•
Xylenes, Total	<0.00401	U *1	0.00401	mg/Kg		08/02/22 14:44	08/03/22 23:16	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	110		70 - 130			08/02/22 14:44	08/03/22 23:16	
1,4-Difluorobenzene (Surr)	96		70 - 130			08/02/22 14:44	08/03/22 23:16	1
Method: Total BTEX - Total BTEX	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/04/22 09:41	
Method: 8015 NM - Diesel Range Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	<50.0		50.0	mg/Kg	— <u> </u>		08/01/22 15:09	
Method: 8015B NM - Diesel Rang	ie Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 19:22	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 19:22	•
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 19:22	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	85		70 - 130			07/29/22 08:55	07/31/22 19:22	
o-Terphenyl	108		70 - 130			07/29/22 08:55	07/31/22 19:22	
		Oalukla						
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Method: 300.0 - Anions, Ion Chro Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Surrogate Summary

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

•			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2656-A-1-F MS	Matrix Spike	104	96
890-2656-A-1-G MSD	Matrix Spike Duplicate	106	93
890-2658-1	SS07	110	96
LCS 880-31337/1-A	Lab Control Sample	113	93
LCSD 880-31337/2-A	Lab Control Sample Dup	90	87
MB 880-31323/5-A	Method Blank	106	87
MB 880-31337/5-A	Method Blank	99	87
Surrogate Legend			
BFB = 4-Bromofluoroben	zene (Surr)		

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2654-A-1-C MS	Matrix Spike	102	110	
890-2654-A-1-D MSD	Matrix Spike Duplicate	99	106	
890-2658-1	SS07	85	108	
LCS 880-30966/2-A	Lab Control Sample	123	137 S1+	
LCSD 880-30966/3-A	Lab Control Sample Dup	107	121	
MB 880-30966/1-A	Method Blank	106	138 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2658-1 SDG: Eddy County NM Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31323/5-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID: Method Blank

Prep Type: Total/NA

31323

						Prep Batch:	3
MB	MB						
esult	Qualifier	RL	Unit	D	Prepared	Analyzed	D

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 13:15	08/03/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 13:15	08/03/22 10:46	1

MB MB

мв мв

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	08	8/02/22 13:15	08/03/22 10:46	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08	8/02/22 13:15	08/03/22 10:46	1

Lab Sample ID: MB 880-31337/5-A

Matrix: Solid

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

Prep Batch: 31337

Analysis Batch: 31375

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:44	08/03/22 21:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 14:44	08/03/22 21:53	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	08/02/22 14:-	08/03/22 21:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	08/02/22 14:-	14 08/03/22 21:53	1

Lab Sample ID: LCS 880-31337/1-A

Matrix: Solid

Analysis Batch: 31375

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

Prep Batch: 31337

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09999		mg/Kg		100	70 - 130	
Toluene	0.100	0.1031		mg/Kg		103	70 - 130	
Ethylbenzene	0.100	0.1082		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.2220		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1387	*+	mg/Kg		139	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1.4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-31337/2-A

Matrix: Solid

Analysis Batch: 31375

Client Sample ID	: Lab Control	Sample Dup
	Dean T	mar Tatal/NIA

Prep Type: Total/NA

Prep Batch: 31337

	Spike	LCSD L	-C2D				%Rec		RPD
Analyte	Added	Result Q	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0998	0.05262 *-	- *1	mg/Kg		53	70 - 130	62	35

QC Sample Results

Job ID: 890-2658-1 Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: LCSD 880-31337/2-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid** Prep Type: Total/NA Prep Batch: 31337 **Analysis Batch: 31375**

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.0998	0.06071	*- *1	mg/Kg		61	70 - 130	52	35
Ethylbenzene	0.0998	0.06794	*- *1	mg/Kg		68	70 - 130	46	35
m-Xylene & p-Xylene	0.200	0.1297	*- *1	mg/Kg		65	70 - 130	52	35
o-Xylene	0.0998	0.09111	*1	mg/Kg		91	70 - 130	41	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

Lab Sample ID: 890-2656-A-1-F MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 31375 Prep Batch: 31337

Sample	Sample	Spike	MS	MS				%Rec
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
<0.00199	U *- *1	0.101	0.08722		mg/Kg	_	87	70 - 130
<0.00199	U *- *1	0.101	0.08202		mg/Kg		82	70 - 130
<0.00199	U *- *1	0.101	0.08158		mg/Kg		81	70 - 130
<0.00398	U *- *1	0.201	0.1625		mg/Kg		81	70 - 130
<0.00199	U *+ *1	0.101	0.09304		mg/Kg		92	70 - 130
	Result <0.00199 <0.00199 <0.00199 <0.00398	Sample Sample Result Qualifier <0.00199	Result Qualifier Added <0.00199	Result Qualifier Added Result <0.00199	Result Qualifier Added Result Qualifier <0.00199	Result Qualifier Added Result Qualifier Unit <0.00199	Result Qualifier Added Result Qualifier Unit D <0.00199	Result Qualifier Added Result Qualifier Unit D %Rec <0.00199

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

Lab Sample ID: 890-2656-A-1-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 31375** Prep Batch: 31337

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U *- *1	0.0998	0.09326		mg/Kg		93	70 - 130	7	35
Toluene	<0.00199	U *- *1	0.0998	0.08591		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00199	U *- *1	0.0998	0.08696		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U *- *1	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	<0.00199	U *+ *1	0.0998	0.09635		mg/Kg		97	70 - 130	3	35

ı		MOD	MOD	
	Surrogate	%Recovery	Qualifier	Limits
	4-Bromofluorobenzene (Surr)	106		70 - 130
	1,4-Difluorobenzene (Surr)	93		70 - 130

MSD MSD

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

Lab Sample ID: MB 880-30966/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 31081 Prep Batch: 30966

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
(GRO)-C6-C10								

Job ID: 890-2658-1

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: MB 880-30966/1-A

Lab Sample ID: LCS 880-30966/2-A

Matrix: Solid

Analysis Batch: 31081

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30966

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/29/22 08:55	07/31/22 10:35	1
0.1. tago 0.gaoo (0.10. 020 000)	00.0		00.0	9/. 19		0.720722 00.00	0.701,22 10.00	

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	07/29/22 08:55	07/31/22 10:35	1
o-Terphenyl	138	S1+	70 - 130	07/29/22 08:55	07/31/22 10:35	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30966

Analysis Batch: 31081 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1127 113 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1195 mg/Kg 120 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	137	S1+	70 - 130

Lab Sample ID: LCSD 880-30966/3-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 31081

Client	Sample	ו יחו	ah	Control	Sample	Dun

Prep Type: Total/NA

Prep Batch: 30966

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	1048		mg/Kg		105	70 - 130	7	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	1111		mg/Kg		111	70 - 130	7	20	
C10-C28)										

70 - 130

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

121

Lab Sample ID: 890-2654-A-1-C MS

Matrix: Solid

o-Terphenyl

Analysis Batch: 31081

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30966

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	999	1120		mg/Kg		108	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	999	993.9		mg/Kg		96	70 - 130	
C10 C28)										

C10-C28)

	IVIS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	110		70 - 130

Job ID: 890-2658-1

Client: Ensolum Project/Site: JRU 108H SDG: Eddy County NM

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

Lab Sample ID: 890-2654-A-1-D MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid**

Analysis Batch: 31081

Prep Type: Total/NA Prep Batch: 30966

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	999	1143		mg/Kg		111	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	999	989.3		mg/Kg		96	70 - 130	0	20
C10-C28)											

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	106		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30913/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 31002

мв мв

	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	<5.00	U	5.00	mg/Kg			07/30/22 22:01	1

Lab Sample ID: LCS 880-30913/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 31002

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	261.9	-	mg/Kg		105	90 - 110	

Lab Sample ID: LCSD 880-30913/3-A

Matrix: Solid

Analysis Batch: 31002

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	267.7		mg/Kg	_	107	90 - 110	2	20	

Lab Sample ID: 890-2653-A-1-B MS

Matrix: Solid

Analysis Batch: 31002

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	4930		2500	7650		ma/Ka		109	90 - 110	

Lab Sample ID: 890-2653-A-1-C MSD

Matrix: Solid

Analysis Ratch: 31002

Alialysis Batch: 51002											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	4930		2500	7677		mg/Kg		110	90 - 110	0	20

Eurofins Carlsbad

Released to Imaging: 3/11/2024 11:17:01 AM

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2659-A-1-B MS

Matrix: Solid

Analysis Batch: 31002

Analysis Batch. 01002										
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	149		250	378.1		mg/Kg		92	90 - 110	

Lab Sample ID: 890-2659-A-1-C MSD

Matrix: Solid

Analysis Batch: 31002

	Alialysis Datcii. 31002											
		Sample	Sample	Spike	MSD	MSD				%Rec		RPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
l	Chloride	149		250	378.6		mg/Kg		92	90 - 110	0	20

QC Association Summary

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

GC VOA

Prep Batch: 31323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31323/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	5035	
MB 880-31337/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	8021B	31337
MB 880-31323/5-A	Method Blank	Total/NA	Solid	8021B	31323
MB 880-31337/5-A	Method Blank	Total/NA	Solid	8021B	31337
LCS 880-31337/1-A	Lab Control Sample	Total/NA	Solid	8021B	31337
LCSD 880-31337/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31337
890-2656-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	31337
890-2656-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31337

Analysis Batch: 31480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30966

Lab Sample ID 890-2658-1	Client Sample ID SS07	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	8015B NM	30966
MB 880-30966/1-A	Method Blank	Total/NA	Solid	8015B NM	30966
LCS 880-30966/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30966
LCSD 880-30966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30966
890-2654-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	30966
890-2654-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30966

Analysis Batch: 31206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: JRU 108H

Job ID: 890-2658-1
SDG: Eddy County NM

HPLC/IC

Leach Batch: 30913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Soluble	Solid	DI Leach	
MB 880-30913/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2658-1	SS07	Soluble	Solid	300.0	30913
MB 880-30913/1-A	Method Blank	Soluble	Solid	300.0	30913
LCS 880-30913/2-A	Lab Control Sample	Soluble	Solid	300.0	30913
LCSD 880-30913/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30913
890-2653-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2653-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913
890-2659-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30913
890-2659-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30913

4

5

8

9

10

12

13

Lab Chronicle

Client: Ensolum Job ID: 890-2658-1 Project/Site: JRU 108H SDG: Eddy County NM

Client Sample ID: SS07

Lab Sample ID: 890-2658-1 Date Collected: 07/26/22 09:35

Matrix: Solid

Date Received: 07/26/22 16:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	31337	08/02/22 14:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31375	08/03/22 23:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31480	08/04/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31206	08/01/22 15:09	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30966	07/29/22 08:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31081	07/31/22 19:22	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30913	07/28/22 10:42	CH	XEN MID
Soluble	Analysis	300.0		1			31002	07/31/22 00:07	SMC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU 108H
Job ID: 890-2658-1
SDG: Eddy County NM

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas		ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report, bu	it the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for w	
the agency does not of	fer certification.	,	ou s, and governming dualismy.	ay molado analytoo for v	
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	ay morado anarytoo tor v	
9 ,		•	, , ,		

3

4

6

0

10

12

Method Summary

Client: Ensolum Job ID: 890-2658-1
Project/Site: JRU 108H SDG: Eddy County NM

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

Protocol References:

DI Leach

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

Deionized Water Leaching Procedure

Laboratory References:

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

Eurofins Carlsbad

1

3

4

6

XEN MID

ASTM

0

10

40

13

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2658-1 SDG: Eddy County NM

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Depth

 890-2658-1
 SS07
 Solid
 07/26/22 09:35
 07/26/22 16:02
 0.5

3

4

6

8

9

11

12

12

eurofins

Address:

Project Manager: Company Name:

Bill to: (if different)

Garrett Green

Company Name:

Ensolum Ben Belill

City, State ZIP:

Carlsbad, NM 88220 3122 National Parks Hwy

City, State ZIP:

Carlsbad, NM 88220 3104 E. Green Street XTO Energy, Inc.

ill@ensolum.com

ANALYSIS

Chain of Custody

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

		-
	www.xenco.com Page	of
	Work Order Comments	
Program	Program: UST/PST 🗌 PRP 🗌 Brownfields 🗌 RRC 📗 Superfund 📗	uperfund [
State of Project:	Project:	
Reporting	Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	Level IV
Deliverab	Deliverables: EDD	
REQUEST	Preservative Codes	Codes
	None: NO	DI Water: H ₂ O

Revised Date 08/25/2020 Rev 2020 2	Rep	6					-				
		4	60	26 22	-		1	I Car		\	3
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	me	Date/Time	7	ire)	Received by: (Signature)	Received		ignature)	Relinquished (Signature)
	ors. It assigns standard terms and conditions as are due to circumstances beyond the control rms will be enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from cilent 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 cilent if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$86.00 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 negotiate.	Eurofins Xer or expenses i to Eurofins >	ompany to ny losses o submitted	client colity for an sample	rchase order from le any responsibli rge of \$5 for each	titutes a valid pur d shall not assum project and a cha	of samples cons st of samples and applied to each	juishment for the cos	ment and relinu If be flable only in charge of \$86	otice: Signature of this docu / service. Eurofins Xenco wil / Eurofins Xenco. A minimun
470 / 7471	TI U Hg: 1631 / 245.1 / 7470 / 7471	o Cu Pb Mn I	Ba Be C	Sb As	SR SR	11	TCLP / SPI		e analy	/letal(s) to t	Circle Method(s) and Metal(s) to be analyzed
Sn U V Zn	Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr TI Sn U V Zn	Cd Ca Cr Co Cu Fe Pb Mg Mn M	Ва Ве В	Al Sb As E	≥ (3)	M Texas 11	8RCRA 13PPM	88	3020:	200.8 / 6020	Total 200.7 / 6010
			1	-							
			1	+		+					
				-							
				-							
Cost Center: 1139071001	Cost Cen			-							
Incident ID: nAPP2217931599	Incident		× ×	×		0.5 Comp	935	7/26/2022	S		\$807
Sample Comments	Sam		-	-	Cont	Depth Comp Cont	Sampled	Sampled	Matrix	ation	Sample Identification
NaCi I+hacoi pic noid. Oni O	- Naci		(8015	ORIDE	k l	I Q	mperature:	Corrected Temperature:			Total Containers:
AlaOHtAssorbis Asid: SABC	No Acetan	890-2658 Chain of Custody	+	-		1.I	Reading:	Temperature Reading:	*	Yes No	Sample Custody Seals:
Nacc ₃	Na ₂ O ₂ O ₃ . Na ₂ O ₃			PA:	P	0.0	actor:	Correction Factor:	N/A	Yes No	Cooler Custody Seals:
NABIS	NaHSC4: NABIS			300	arar	VM-007	Ë	Thermometer ID:	No	: \ Yes	Samples Received Intact:
ידי פוני	H ₃ PO ₄ : HP			(0.0	nete	(Yes) No	Wet Ice:	(Yes) No	Blank:	Temp Blank:	SAMPLE RECEIPT
NaOH: Na	H ₂ SO ₄ : H ₂				rs	/ed by 4:30pm	the lab, if received by 4:30pm		NA		PO #:
	нсг. нс			_		lay received by	TAT starts the day received by		Liz Cheli		Sampler's Name:
	Cool: Cool					5 day TAT	Due Date:		Eddy County, NM	Eddy (Project Location:
DI Water: H ₂ O	None: NO				Pres. Code	Rush	☑ Routine	0	03E1558090	03E	Project Number:
Lesel Agil Ag Codes	riga	ANALYSIS REQUEST				round	Turn Around		JRU 108H	JR	Project Name:

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2658-1

SDG Number: Eddy County NM

List Source: Eurofins Carlsbad

Login Number: 2658 List Number: 1 Creator: Clifton, Cloe

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

4

2

3

4

0

0

11

12

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2658-1

SDG Number: Eddy County NM

List Source: Eurofins Midland

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 2658

List Creation: 07/28/22 10:13 AM

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

Released to Imaging: 3/11/2024 11:17:01 AM

2

4

5

1

9

11

1 /

<u>'</u>



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2917-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

eurofins 🔆

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 9/22/2022 9:09:12 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

EOL

Have a Question?

.....LINKS

Review your project results through

Received by OCD: 10/25/2023 3:55:27 PM

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 3/11/2024 11:17:01 AM This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-2917-1
SDG: 03E1558090

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	9
QC Sample Results	10
QC Association Summary	15
Lab Chronicle	17
Certification Summary	19
Method Summary	20
Sample Summary	21
Chain of Custody	22
Receipt Checklists	23

Definitions/Glossary

Job ID: 890-2917-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit**

Presumptive **PRES** QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Job ID: 890-2917-1

SDG: 03E1558090

Case Narrative

Client: Ensolum
Project/Site: JRU 108H

Job ID: 890-2917-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2917-1

Receipt

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

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01 (890-2917-1), BH01A (890-2917-2) and BH02 (890-2917-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

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

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

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

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-34288 and analytical batch 880-34499 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.

3

4

5

7

_

10

10

13

Lab Sample ID: 890-2917-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BH01

Date Collected: 09/08/22 10:45 Date Received: 09/09/22 09:22

Sample Depth: 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Ethylbenzene	0.0140		0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
m-Xylene & p-Xylene	0.0377		0.00399		mg/Kg		09/19/22 14:33	09/22/22 01:28	
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Xylenes, Total	0.0377		0.00399		mg/Kg		09/19/22 14:33	09/22/22 01:28	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	228	S1+	70 - 130				09/19/22 14:33	09/22/22 01:28	
1,4-Difluorobenzene (Surr)	99		70 - 130				09/19/22 14:33	09/22/22 01:28	
Method: Total BTEX - Total BTEX	X Calculation								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	0.0517		0.00399		mg/Kg			09/22/22 09:55	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	6870		250		mg/Kg			09/13/22 10:25	
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	267	*1	250		mg/Kg		09/12/22 08:48	09/12/22 18:54	
Diesel Range Organics (Over C10-C28)	5760		250		mg/Kg		09/12/22 08:48	09/12/22 18:54	
Oll Range Organics (Over C28-C36)	841		250		mg/Kg		09/12/22 08:48	09/12/22 18:54	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	93		70 - 130				09/12/22 08:48	09/12/22 18:54	
o-Terphenyl	107		70 - 130				09/12/22 08:48	09/12/22 18:54	
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	2130		25.2		mg/Kg			09/15/22 11:18	

Client Sample ID: BH01A

Date Collected: 09/08/22 10:55

Lab Sample ID: 890-2917-2

Matrix: Solid

Date Collected: 09/08/22 10:55 Date Received: 09/09/22 09:22

Sample Depth: 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
Ethylbenzene	0.00502		0.00198		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
m-Xylene & p-Xylene	0.0113		0.00397		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
o-Xylene	0.0114		0.00198		mg/Kg		09/19/22 14:33	09/22/22 01:48	1
Xylenes, Total	0.0227		0.00397		mg/Kg		09/19/22 14:33	09/22/22 01:48	1

Eurofins Carlsbad

2

3

4

6

8

10

12

Lab Sample ID: 890-2917-2

Client Sample Results

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BH01A

Date Collected: 09/08/22 10:55 Date Received: 09/09/22 09:22

Sample Depth: 4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	154	S1+	70 - 130	09/19/22 14:33	09/22/22 01:48	1
1,4-Difluorobenzene (Surr)	88		70 - 130	09/19/22 14:33	09/22/22 01:48	1
– Method: Total BTEX - Total BTE	Y Calculation					

Method: Total BTEX - Total BTEX	Calculation						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0277	0.00397	mg/Kg			09/22/22 09:55	1

Method: 8015 NM - Diesel Range C)rganics (DRO) ((GC)					
Analyte	Result Qua	alifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2550	49.9	mg/Kg			09/13/22 10:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	75.9	*1	49.9		mg/Kg		09/12/22 08:48	09/12/22 19:37	1
Diesel Range Organics (Over C10-C28)	2140		49.9		mg/Kg		09/12/22 08:48	09/12/22 19:37	1
Oll Range Organics (Over C28-C36)	331		49.9		mg/Kg		09/12/22 08:48	09/12/22 19:37	1
C28-C36) Surrogate	%Recovery	Qualifier	Limits				Prepared	Analvzed	

Surrogate	%Recovery Qualifi	er Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93	70 - 130	09/12/22 08:48	09/12/22 19:37	1
o-Terphenyl	89	70 - 130	09/12/22 08:48	09/12/22 19:37	1
_					

Method: 300.0 - Anions, Ion Chrom	natography - S	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3980		25.0		mg/Kg			09/15/22 11:23	5

Client Sample ID: BH02

Date Collected: 09/08/22 12:20

Lab Sample ID: 890-2917-3

Matrix: Solid

Date Received: 09/09/22 09:22

Sample Depth: 2

Total BTEX

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Toluene	0.00433		0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Ethylbenzene	0.0947		0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
m-Xylene & p-Xylene	0.353		0.00402		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
o-Xylene	0.379		0.00201		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Xylenes, Total	0.732		0.00402		mg/Kg		09/19/22 14:33	09/22/22 02:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Bromofluorobenzene (Surr)	162	S1+	70 - 130				09/19/22 14:33	09/22/22 02:09	1
1,4-Difluorobenzene (Surr)	97		70 - 130				09/19/22 14:33	09/22/22 02:09	1

Eurofins Carlsbad

09/22/22 09:55

0.00402

mg/Kg

0.831

2

3

4

7

Ŏ

10

12

Lab Sample ID: 890-2917-3

09/12/22 19:15

09/12/22 08:48

Client Sample Results

Client: Ensolum Job ID: 890-2917-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BH02

Date Collected: 09/08/22 12:20 Date Received: 09/09/22 09:22

Sample Depth: 2

Method: 8015 NM - Diesel Range	Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3990	49.8	mg/Kg			09/13/22 10:25	1
Г., .,							

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	406	*1	49.8		mg/Kg		09/12/22 08:48	09/12/22 19:15	1
(GRO)-C6-C10									
Diesel Range Organics (Over	3090		49.8		mg/Kg		09/12/22 08:48	09/12/22 19:15	1
C10-C28)									
Oll Range Organics (Over	497		49.8		mg/Kg		09/12/22 08:48	09/12/22 19:15	1
C28-C36)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				09/12/22 08:48	09/12/22 19:15	1

Method: 300.0 - Anions, Ion Chroma	atography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7530		49.9		mg/Kg			09/15/22 11:27	10

70 - 130

Lab Sample ID: 890-2917-4 **Client Sample ID: BH03 Matrix: Solid**

Date Collected: 09/08/22 13:00 Date Received: 09/09/22 09:22

Sample Depth: 1

o-Terphenyl

Method: 8021B - Volatile Organic Compounds (GC)

Method: 8021B - Volatile Orga	inic Compounds ((GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Toluene	< 0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 14:33	09/22/22 02:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130				09/19/22 14:33	09/22/22 02:29	1
1 / Diffuorobenzene (Surr)	22		70 120				00/10/22 14:22	00/22/22 02:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	;
Method: Total BTEX - Total BTEX Calcula	ition									
1,4-Difluorobenzene (Surr)	88		70 - 130			C	09/19/22 14:33	09/22/22 02:29	1	

Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 09:55	1
Method: 8015 NM - Diesel Range C	Organics (DR	O) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	75.6		49.9		mg/Kg			09/13/22 10:25	1

Method: 8015B NM - Diesel Ran	Method: 8015B NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U *1	49.9		mg/Kg		09/12/22 08:48	09/12/22 19:58	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		09/12/22 08:48	09/12/22 19:58	1
C10-C28)									

Lab Sample ID: 890-2917-4

Client Sample Results

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BH03

Date Collected: 09/08/22 13:00 Date Received: 09/09/22 09:22

Sample Depth: 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over	75.6		49.9		mg/Kg		09/12/22 08:48	09/12/22 19:58	1
C28-C36)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				09/12/22 08:48	09/12/22 19:58	1
o-Terphenyl	95		70 - 130				09/12/22 08:48	09/12/22 19:58	1

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	54.1		5.00		mg/Kg			09/14/22 23:30	1

Eurofins Carlsbad

2

3

4

0

8

9

11

13

Surrogate Summary

Job ID: 890-2917-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits
		BFB1	DFBZ1	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
2915-A-1-C MS	Matrix Spike	115	109	
-2915-A-1-D MSD	Matrix Spike Duplicate	117	102	
-2917-1	BH01	228 S1+	99	
)-2917-2	BH01A	154 S1+	88	
0-2917-3	BH02	162 S1+	97	
)-2917-4	BH03	118	88	
S 880-34851/1-A	Lab Control Sample	114	106	
SD 880-34851/2-A	Lab Control Sample Dup	115	108	
3 880-34851/5-A	Method Blank	88	77	
3 880-34941/5-A	Method Blank	100	93	

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2907-A-1-C MS	Matrix Spike	98	93	
890-2907-A-1-D MSD	Matrix Spike Duplicate	99	93	
890-2917-1	BH01	93	107	
890-2917-2	BH01A	93	89	
890-2917-3	BH02	100	84	
890-2917-4	BH03	95	95	
LCS 880-34181/2-A	Lab Control Sample	144 S1+	151 S1+	
LCSD 880-34181/3-A	Lab Control Sample Dup	122	130	
MB 880-34181/1-A	Method Blank	105	109	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2917-1 SDG: 03E1558090 Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

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

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

Prep Type: Total/NA

Prep Batch: 34851

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

MB MB

MD MD

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

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

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34851

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

LCS LCS

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

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

Matrix: Solid

Analysis Batch: 35013

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 34851

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

LCSD LCSD

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

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

Matrix: Solid

Analysis Batch: 35013

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

Prep Batch: 34851

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

Eurofins Carlsbad

Page 10 of 24

Prep Batch: 34851

QC Sample Results

Job ID: 890-2917-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

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

Matrix: Solid Analysis Batch: 35013

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

MS MS

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

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

Matrix: Solid

Analysis Batch: 35013

Prep Type: Total/NA Prep Batch: 34851

mg/Kg

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

0.1037

0.0996

MSD MSD

<0.00202 U

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

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

Matrix: Solid

o-Xylene

Analysis Batch: 35013

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

70 - 130

104

Prep Batch: 34941

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

MB MB

MB MB

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

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

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

Analysis Batch: 34171

MB MB Analyte Result Qualifier RL MDL Unit Prepared <50.0 U 50.0 09/12/22 08:48 09/12/22 10:56 Gasoline Range Organics mg/Kg

(GRO)-C6-C10

Eurofins Carlsbad

Prep Type: Total/NA

Prep Batch: 34181

QC Sample Results

Client: Ensolum Job ID: 890-2917-1 SDG: 03E1558090 Project/Site: JRU 108H

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

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

Lab Sample ID: LCS 880-34181/2-A

Analysis Batch: 34171

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34181

Analyte	Result	Qualifier	RL	MDL Ur	nit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	m	g/Kg		09/12/22 08:48	09/12/22 10:56	1
C10-C28)									
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mç	g/Kg		09/12/22 08:48	09/12/22 10:56	1

MB MB

MB MB

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34181

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 984.6 mg/Kg 98 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1000 100 70 - 130 mg/Kg C10-C28)

LCS LCS

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

Lab Sample ID: LCSD 880-34181/3-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 34171

Analysis Batch: 34171

Prep Type: Total/NA

Prep Batch: 34181

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

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

Lab Sample ID: 890-2907-A-1-C MS

Matrix: Solid

Analysis Batch: 34171

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 34181

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1 *1	998	611.1	F1	mg/Kg		59	70 - 130	
Diesel Range Organics (Over	<49.8	U	998	859.4		mg/Kg		83	70 - 130	

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	93		70 - 130

Job ID: 890-2917-1 SDG: 03E1558090

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

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

Matrix: Solid

Client: Ensolum Project/Site: JRU 108H

Prep Type: Total/NA Analysis Batch: 34171 Prep Batch: 34181

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

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

Method: 300.0 - Anions, Ion Chromatography

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

Matrix: Solid

Analysis Batch: 34499

мв мв

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

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

Matrix: Solid

Analysis Batch: 34499

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

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

Matrix: Solid

Analysis Batch: 34499

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

Lab Sample ID: 880-19037-A-2-D MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34499

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	29800	F1	12600	54900	F1	ma/Ka		200	90 110	

Lab Sample ID: 880-19037-A-2-E MSD

Matrix: Solid

Analysis Batch: 34499

Analysis Baton, 04455											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	29800	F1	12600	53580	F1	ma/Ka		190	90 - 110	2	20

Eurofins Carlsbad

Prep Type: Soluble

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-2917-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 300.0 - Anions, Ion Chromatography (Continued)

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

Matrix: Solid

Analysis Batch: 34499

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	22.1		250	276.5		mg/Kg		102	90 - 110	

Lab Sample ID: 890-2913-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid **Prep Type: Soluble**

Analysis Batch: 34499

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

QC Association Summary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 34851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	5035	
890-2917-2	BH01A	Total/NA	Solid	5035	
890-2917-3	BH02	Total/NA	Solid	5035	
890-2917-4	BH03	Total/NA	Solid	5035	
MB 880-34851/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 34941

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

Analysis Batch: 35013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8021B	34851
890-2917-2	BH01A	Total/NA	Solid	8021B	34851
890-2917-3	BH02	Total/NA	Solid	8021B	34851
890-2917-4	BH03	Total/NA	Solid	8021B	34851
MB 880-34851/5-A	Method Blank	Total/NA	Solid	8021B	34851
MB 880-34941/5-A	Method Blank	Total/NA	Solid	8021B	34941
LCS 880-34851/1-A	Lab Control Sample	Total/NA	Solid	8021B	34851
LCSD 880-34851/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34851
890-2915-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34851
890-2915-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34851

Analysis Batch: 35144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-2917-1	BH01	Total/NA	Solid	Total BTEX
890-2917-2	BH01A	Total/NA	Solid	Total BTEX
890-2917-3	BH02	Total/NA	Solid	Total BTEX
890-2917-4	BH03	Total/NA	Solid	Total BTEX

GC Semi VOA

Analysis Batch: 34171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8015B NM	34181
890-2917-2	BH01A	Total/NA	Solid	8015B NM	34181
890-2917-3	BH02	Total/NA	Solid	8015B NM	34181
890-2917-4	BH03	Total/NA	Solid	8015B NM	34181
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015B NM	34181
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34181
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34181
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34181
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34181

Prep Batch: 34181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

Δ

5

8

9

10

12

QC Association Summary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC Semi VOA (Continued)

Prep Batch: 34181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-2	BH01A	Total/NA	Solid	8015NM Prep	
890-2917-3	BH02	Total/NA	Solid	8015NM Prep	
890-2917-4	BH03	Total/NA	Solid	8015NM Prep	
MB 880-34181/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34181/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2907-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2907-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Total/NA	Solid	8015 NM	
890-2917-2	BH01A	Total/NA	Solid	8015 NM	
890-2917-3	BH02	Total/NA	Solid	8015 NM	
890-2917-4	BH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Soluble	Solid	DI Leach	
890-2917-2	BH01A	Soluble	Solid	DI Leach	
890-2917-3	BH02	Soluble	Solid	DI Leach	
890-2917-4	BH03	Soluble	Solid	DI Leach	
MB 880-34288/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-19037-A-2-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19037-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2917-1	BH01	Soluble	Solid	300.0	34288
890-2917-2	BH01A	Soluble	Solid	300.0	34288
890-2917-3	BH02	Soluble	Solid	300.0	34288
890-2917-4	BH03	Soluble	Solid	300.0	34288
MB 880-34288/1-A	Method Blank	Soluble	Solid	300.0	34288
LCS 880-34288/2-A	Lab Control Sample	Soluble	Solid	300.0	34288
LCSD 880-34288/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34288
880-19037-A-2-D MS	Matrix Spike	Soluble	Solid	300.0	34288
880-19037-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34288
890-2913-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	34288
890-2913-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34288

Eurofins Carlsbad

2

2

Λ

6

8

9

1 1

12

Client: Ensolum Job ID: 890-2917-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BH01 Lab Sample ID: 890-2917-1

Date Collected: 09/08/22 10:45 Matrix: Solid Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 01:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	34171	09/12/22 18:54	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		5			34499	09/15/22 11:18	CH	EET MID

Client Sample ID: BH01A Lab Sample ID: 890-2917-2

Date Collected: 09/08/22 10:55 Matrix: Solid Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 01:48	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 19:37	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		5			34499	09/15/22 11:23	CH	EET MID

Client Sample ID: BH02 Lab Sample ID: 890-2917-3 Date Collected: 09/08/22 12:20

Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 02:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MIC
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 19:15	SM	EET MIC
Soluble	Leach	DI Leach			5.01 g	50 mL	34288	09/12/22 11:50	KS	EET MIC
Soluble	Analysis	300.0		10			34499	09/15/22 11:27	CH	EET MID

Client Sample ID: BH03 Lab Sample ID: 890-2917-4

Date Collected: 09/08/22 13:00 Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34851	09/19/22 14:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35013	09/22/22 02:29	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35144	09/22/22 09:55	AJ	EET MID

Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

Released to Imaging: 3/11/2024 11:17:01 AM

Lab Chronicle

Client: Ensolum Job ID: 890-2917-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BH03

Lab Sample ID: 890-2917-4 Date Collected: 09/08/22 13:00

Matrix: Solid

Date Received: 09/09/22 09:22

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			34383	09/13/22 10:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34181	09/12/22 08:48	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34171	09/12/22 19:58	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34288	09/12/22 11:50	KS	EET MID
Soluble	Analysis	300.0		1			34499	09/14/22 23:30	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-2917-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas		ELAP	T104704400-22-24	06-30-23	
The following analytes	are included in this report, bu	it the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for w	
the agency does not of	fer certification.	,	ou s, and governmig dualismy.	ay molado analytoo for v	
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	ay morado anarytoo tor v	
9 ,		•	, , ,		

3

4

5

7

9

44

12

Method Summary

Job ID: 890-2917-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-2917-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2917-1	BH01	Solid	09/08/22 10:45	09/09/22 09:22	2
890-2917-2	BH01A	Solid	09/08/22 10:55	09/09/22 09:22	4
890-2917-3	BH02	Solid	09/08/22 12:20	09/09/22 09:22	2
890-2917-4	BH03	Solid	09/08/22 13:00	09/09/22 09:22	1

eurofins	E-
eurofins	Enteren

Chain of Custody

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

Work Order No		

							Hobb	s, NM ((575) 39	92-7550	0, Carls	bad, NM ((575) 988-	3199				www.xe	nco.cor	n Page		of	
Project Manager:	Tacoma Morrissey					Bill to: (if	Garrett Green							Work Order Comments									
Company Name:	: Ensolum					Compar	e:	XTO Energy							Program: UST/PST PRP Brownfields RRC Superfund						<u> </u>		
Address:	3122 National Parks Hwy						Address:				3104 E. Green St.						of Project:						Ī
City, State ZIP:	Carlsbad, NM 88220					City, Sta	te ZIP:		Carisbad, NM 88220						Repo	rting: Level I	I ☐ Level	III 🗆 PS	ST/UST [TRRP	l evel!\	E	
hone:						iii: Garret.Green@ExxonMobil.com								Deliverables: EDD ☐ ADaPT ☐ Other:									
-	1			_				1	I											1 -			=
Project Name:	JRU 108H					Turn Around			ANALYSIS RE						SREQ	UEST			_	Preservative Codes			-
Project Number:		03E1	155809	0	Routine	Routine Rush ue Date:		Code		-	-	-			-						lone: NO DI Wat	DI Water: H	¿O
Project Location:			14414		Due Date:			1												Cool: Co		MeOH: Me	
Sampler's Name: PO #:	-	Conno	r VVhitn	nan	TAT starts the		4:30pm						1000000000000			Wallian and a land						HNO ₃ : HN NaOH: Na	
SAMPLE RECE	IDT	Toma D	lank:	Yes No	Wet Ice:	Vad		ter												H ₂ SU ₄ : H ₂ Na			Un: Na
Samples Received I		Temp B	No	Thermomete	-	NMO	_	ame	0.0							1111				NaHSO ₄ :			
Cooler Custody Sea		Yes No	_	Correction F		- 8	6.0	Par	(EPA: 300.0)											Na ₂ S ₂ O ₃			
Sample Custody Sea		Yes No	1	Temperature		1.4	7		(EP)				890-	2917 (Chain o	f Cust	ody			Zn Aceta	-	H: Zn	
otal Containers:				Corrected To		1.	2			15)	(8021	. 4	1	1	1							Acid: SAPC	
Sample Ider	ntificatio	n	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES	TPH (8015)	втех (8									Sar	nple Co	omments	
BHO	01		S	9/8/2022	10:45	2	G	1	x	x	x									Incident	ID:		
вно	1A		S	9/8/2022	10:55	4	G	1	х	x	х									nAPP22179	31599		
ВНО)2		S	9/8/2022	12:20	2	G	1	x	×	×									Cost Ce	nter:		
BHO	03		S	9/8/2022	13:00	1	G	1	x	x	x					1000					11390	71001	
																				AFE:			
		/			,																		Ξ
				amy	hea													100					
																							Ξ
									_					ALL									
						0					1						, = - U						
Total 200.7 / 6	010 2	200.8 / 60	020:	8F	RCRA 13P	PM Tex	as 11	AI S	b As	Ba I	Be B	Cd Ca	Cr Co	Cu F	e Pb	Ma M	n Mo Ni I	< Se Aq	SiO ₂ N	Na Sr Ti	Sn U	V Zn	-
Circle Method(s) a					TCLP / SI											-		-	_	245.1 / 7			
otice: Signature of this f service. Eurofins Xen f Eurofins Xenco. A mi	co will be li	able only fo	or the cos	t of samples an	d shall not assu	ume any res	ponsibil	ity for as	ny losse	s or ex	penses i	ncurred by	y the client	if such I	osses are	due to	circumstances	beyond the	control	d.			
Relinquished by	y: (Signa	iture)	,	Receive	d by: (Signa	ature)			Date	/Time		Relin	nquished	by: (S	Signatu	re)	Rece	ived by: (Signatu	re)	D	ate/Time	
Cathon		1 / -		-	9.0	9.22 928																	

Page 22 of 24

Revised Date 08/25/2020 Rev. 2020 2

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2917-1 SDG Number: 03E1558090

Login Number: 2917 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or 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	
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	
ppropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
here is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is 6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2917-1 SDG Number: 03E1558090

Login Number: 2917 **List Source: Eurofins Midland** List Number: 2 List Creation: 09/12/22 09:08 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").



ANALYTICAL REPORT

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

Laboratory Job ID: 890-3258-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

Revision: 1

For:

🗱 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

JURAMER

Authorized for release by: 11/2/2022 4:35:09 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Review your project

results through

..... LINKS

Have a Question?



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 3/11/2024 11:17:01 AM

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3258-1
SDG: 03E1558090

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receint Checklists	18

Definitions/Glossary

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC VOA

Qualifier **Qualifier Description** F1 MS and/or MSD recovery exceeds control limits. S1-Surrogate recovery exceeds control limits, low biased.

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description**

MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

Glossary

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

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

MDC Minimum Detectable Concentration (Radiochemistry) MDL Method Detection Limit

MI Minimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

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)

Too Numerous To Count **TNTC**

Case Narrative

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3258-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3258-1

REVISION

The report being provided is a revision of the original report sent on 10/31/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The sample was received on 10/21/2022 10:55 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: BG01 (890-3258-1).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control limits.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-38417 and analytical batch 880-38323 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37579 and analytical batch 880-37788 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.

2

3

4

9

10

12

15

| 1 4

Matrix: Solid

Lab Sample ID: 890-3258-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BG01

Date Collected: 10/20/22 14:30 Date Received: 10/21/22 10:55

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	
Toluene	< 0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	
Ethylbenzene	< 0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	
m-Xylene & p-Xylene	< 0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 07:28	
o-Xylene	< 0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 07:28	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 07:28	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	127		70 - 130			10/26/22 14:13	10/29/22 07:28	
1,4-Difluorobenzene (Surr)	92		70 - 130			10/26/22 14:13	10/29/22 07:28	
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/30/22 21:36	
	_	•	DRO) (GC)					
	_	Organics (Qualifier	DRO) (GC) RL	Unit	D	Prepared	Analyzed	Dil Fa
Method: SW846 8015 NM - Did Analyte Total TPH	_	Qualifier	, , , ,	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/25/22 11:30	Dil Fa
Analyte Total TPH	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared		Dil Fa
Analyte Total TPH Method: SW846 8015B NM - D	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Description Analyte Gasoline Range Organics	Result <49.9	Qualifier U Organics Qualifier	RL 49.9 (DRO) (GC)	mg/Kg	_ =	<u> </u>	10/25/22 11:30	
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9 Diesel Range Result	Qualifier U Organics Qualifier U	RL 49.9 (DRO) (GC) RL	mg/Kg Unit	_ =	Prepared	10/25/22 11:30 Analyzed	
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 Diesel Range Result <49.9	Qualifier U Organics Qualifier U	RL 49.9 (DRO) (GC) RL 49.9	mg/Kg Unit mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:03	
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9 Diesel Range Result <49.9 <49.9	Qualifier U Organics Qualifier U U	RL 49.9 (DRO) (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:03 11/02/22 05:03	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate	Result	Qualifier U Organics Qualifier U U	RL 49.9 (DRO) (GC) RL 49.9 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.9	Qualifier U Organics Qualifier U U	RL 49.9 (DRO) (GC) RL 49.9 49.9 Limits	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03 Analyzed	Dil Fa
Analyte	Result <49.9	Qualifier U Organics Qualifier U U U Qualifier	RL 49.9 (DRO) (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03 11/02/22 05:03 Analyzed 11/02/22 05:03	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <49.9 Olesel Range Result <49.9 <49.9 <49.9	Qualifier U Organics Qualifier U U U Qualifier	RL 49.9 (DRO) (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg	_ =	Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:03 11/02/22 05:03 11/02/22 05:03 Analyzed 11/02/22 05:03	Dil Fa

Eurofins Carlsbad

2

3

6

8

10

12

13

Surrogate Summary

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percent	Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20605-A-1-E MS	Matrix Spike	101	92	
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90	
890-3258-1	BG01	127	92	
LCS 880-37911/1-A	Lab Control Sample	99	91	
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91	
MB 880-37911/5-A	Method Blank	102	87	
MB 880-38021/5-A	Method Blank	72	60 S1-	

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

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

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3258-1	BG01	70	74	
890-3335-A-1-C MS	Matrix Spike	88	86	
890-3335-A-1-D MSD	Matrix Spike Duplicate	79	76	
LCS 880-38417/2-A	Lab Control Sample	101	106	
LCSD 880-38417/3-A	Lab Control Sample Dup	90	95	
MB 880-38417/1-A	Method Blank	92	99	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	10/26/22 14:1	3 10/29/22 01:12	1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/26/22 14:1	3 10/29/22 01:12	1

Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.07938		mg/Kg		79	70 - 130	6	35	
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35	
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35	
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35	
o-Xylene	0.100	0.08950		mg/Kg		89	70 - 130	4	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1.4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

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

Prep Batch: 37911

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits mg/Kg Benzene <0.00201 U F1 0.100 0.08080 80 70 - 130 Toluene <0.00201 UF1 0.100 0.07923 mg/Kg 78 70 - 130

QC Sample Results

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 880-20605-A-1-E MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 38089** Prep Batch: 37911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1	0.100	0.07637		mg/Kg		76	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1440		mg/Kg		72	70 - 130	
o-Xylene	<0.00201	U	0.100	0.08398		mg/Kg		84	70 - 130	
	Ethylbenzene m-Xylene & p-Xylene	Analyte Result Ethylbenzene <0.00201	Analyte Result Qualifier Ethylbenzene <0.00201	Analyte Result Qualifier Added Ethylbenzene <0.00201	Analyte Result Ethylbenzene Qualifier Value Added Added Added Value Result Value m-Xylene & p-Xylene <0.00402	Analyte Result ethylbenzene Qualifier value Added value Result value Qualifier value Added value Result value Qualifier value Ethylbenzene <0.00201	Analyte Result Ethylbenzene Qualifier Added Output Result Qualifier Output Unit May 2000 m-Xylene & p-Xylene <0.00402	Analyte Result Ethylbenzene Qualifier Added One of the properties of the propertie	Analyte Result Ethylbenzene Qualifier Added One of the property of t	Analyte Result Qualifier Added Added Added Result Qualifier Qualifier Unit D %Rec Limits Ethylbenzene <0.00201

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 101 70 - 130 1,4-Difluorobenzene (Surr) 92 70 - 130

Lab Sample ID: 880-20605-A-1-F MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Solid Analysis Batch: 38089

Prep Batch: 37911

	Sample	Sample	Spike	เพอบ	เพอบ				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0990	0.06610	F1	mg/Kg		66	70 - 130	20	35
Toluene	<0.00201	U F1	0.0990	0.06481	F1	mg/Kg		65	70 - 130	20	35
Ethylbenzene	<0.00201	U F1	0.0990	0.06337	F1	mg/Kg		64	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1224	F1	mg/Kg		62	70 - 130	16	35
o-Xylene	<0.00201	U	0.0990	0.07052		mg/Kg		71	70 - 130	17	35

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 102 70 - 130 1,4-Difluorobenzene (Surr) 90 70 - 130

Lab Sample ID: MB 880-38021/5-A **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 38089 Prep Batch: 38021 MR MR

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	10/27/22 13:34	10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60	S1-	70 - 130	10/27/22 13:34	10/28/22 13:48	1

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

Lab Sample ID: MB 880-38417/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 38323** Prep Batch: 38417

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
(GRO)-C6-C10								

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-38417/1-A

Matrix: Solid

Analysis Batch: 38323

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38417

-	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			11/01/22 15:08	11/01/22 21:10	1
o-Terphenyl	99		70 - 130			11/01/22 15:08	11/01/22 21:10	1

Lab Sample ID: LCS 880- Matrix: Solid Analysis Batch: 38323			Spike	LCS	LCS				Prep Type: Total/NA Prep Batch: 38417 %Rec
Analyte			Added	_	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1076		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1008		mg/Kg		101	70 - 130
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	101		70 - 130						
o-Terphenyl	106		70 - 130						

Lab Gample ID. LOOD 000-0041770-A				Offert Gample 13. Lab Gontroi Gample 34									
						Prep Ty	pe: Tot	al/NA					
						Prep E	atch:	38417					
Spike	LCSD	LCSD				%Rec		RPD					
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit					
1000	1087		mg/Kg		109	70 - 130	1	20					
1000	910.4		mg/Kg		91	70 - 130	10	20					
	Added	Added Result 1000 1087	Spike LCSD LCSD Added Result Qualifier 1000 1087	Spike LCSD LCSD Added Result Qualifier mg/Kg	Spike LCSD LCSD Added Result Qualifier Unit D mg/Kg	Spike LCSD LCSD Added Result Qualifier Unit mg/Kg D %Rec 1000 1087 mg/Kg 109	Spike LCSD LCSD WRec	Prep Type: Tot Prep Batch: 3					

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-3335 Matrix: Solid Analysis Batch: 38323		Sample Spike	Snike	MS	MS		CI	ient Sa	Prep Ty	Matrix Spike pe: Total/NA satch: 38417
Analyte	•	Qualifier	Added	_	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	812.4		mg/Kg		79	70 - 130	
Diesel Range Organics (Over C10-C28)	77.7	F1	997	799.4		mg/Kg		72	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	88		70 - 130							
o-Terphenyl	86		70 - 130							

Eurofins Carlsbad

3

4

6

8

10

12

rofins Carlsbac

Prep Type: Total/NA

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3335-A-1-D MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Analysis Batch: 38323

Prep Batch: 38417 Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier D %Rec Limits **RPD** Limit Analyte Unit Gasoline Range Organics <50.0 U 999 984.3 mg/Kg 96 70 - 130 19 20 (GRO)-C6-C10 Diesel Range Organics (Over 999 702.0 F1 62 70 - 130 77.7 F1 mg/Kg 13 20

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	76		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

MB MB

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	J	5.00	mg/Kg			10/25/22 19:00	1

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble Matrix: Solid**

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	242 4		ma/Ka		97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A **Client Sample ID: Lab Control Sample Dup Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.5		mg/Kg	_	97	90 - 110	0	20

Lab Sample ID: 890-3252-A-43-B MS **Client Sample ID: Matrix Spike Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	853	F1	250	1060	F1	ma/Ka		83	90 _ 110	

Lab Sample ID: 890-3252-A-43-C MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

Analysis Baton, 07700											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	853	F1	250	1030	F1	ma/Ka		71	90 - 110	3	20

QC Association Summary

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

GC VOA

_			_			_		_		_		
P	re	n	R	2	tr	h	•	3	7	a	11	1
		ν.	_	u	··			•		J		

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8015 NM	

Analysis Batch: 38323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8015B NM	38417
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015B NM	38417
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38417
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38417
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38417
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38417

Prep Batch: 38417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Total/NA	Solid	8015NM Prep	
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3258-1	BG01	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

__

3

5

7

0

10

11

13

14

Lab Chronicle

Client: Ensolum Job ID: 890-3258-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BG01 Lab Sample ID: 890-3258-1 Date Collected: 10/20/22 14:30

Matrix: Solid

Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 07:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38194	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37810	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	38417	11/01/22 15:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38323	11/02/22 05:03	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		1			37788	10/25/22 20:41	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3258-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analyte	s are included in this ren	ort but the laboratory is r	not certified by the governing authority.	This list may include analytes for
,		ort, but the laboratory is i	iot certified by the governing authority.	This list may include analytes for
the agency does not		ort, but the laboratory is i	lot certilled by the governing authority.	This list may include analytes for
		Matrix	Analyte	This list may include analytes for
the agency does not o	offer certification.	•	, , ,	This list may include analytes for

_

А

5

ŏ

10

12

13

14

Method Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3258-1

SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3258-1

SDG: 03E1558090

Lab Sample ID Client Sample ID Matrix Collected Received Depth 890-3258-1 BG01 Solid 10/20/22 14:30 10/21/22 10:55 0.5'

13 14

Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (57) Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

DI Water: H ₂ O	None: NO		
Preservative Codes	Prese	QUEST	ANALYSIS REQUEST
ther	ADaPT Other:	Deliverables: EDD	
RP Level IV L	ST/UST TR	Reporting: Level II Level III Level III PST/UST TRRP Level IVL	arlsbad, NM 88220
]	1	State of Project:	104 E. Green Street
RC Superfund	ownfields 🗌 RI	Program: UST/PST 🗌 PRP 🗎 Brownfields 🗎 RRC 🗎 Superfund 🗀	TO Energy, Inc.
	Work Order Comments	Work Orde	sarrett Green
Page1_ of1_		www.xenco.com	
			5) 392-7550, Carlsbad, NM (575) 988-3199

Phone:

9898540852 Carlsbad, NM 88220 3122 National parks Hwy

City, State ZIP:

ddress: ompany Name:

oject Manager:

Bill to: (if different)

Address: Company Name:

City, State ZIP:

Ensolum, LLC Ben Belill

Samples Received Intact: SAMPLE RECEIPT

Temp Blank:

(res) No

Wet ice:

N_o

Parameters

Š

ooler Custody Seals:

ample Custody Seals:

Yes Yes

N_O NO NIA

E

Temperature Reading Corrected Temperature:

CHLORIDES (EPA: 300.0)

890-3258 Chain of Custody

H3PO4: HP H₂S0₄: H₂ Cool: Cool

None: NO

MeOH: Me HNO₃: HN NaOH: Na

Correction Factor: Thermometer ID:

Sample Identification BG01

Matrix

Date Sampled 10/20/2022

Sampled

Depth

Comp Grab/

Cont # of

TPH (8015)

BTEX (8021

Time

1430

0.5

|Grab/

S

Sampler's Name:

oject Location:

EDDY COUNTY, NM

Due Date:

☑ Routine

Rush

Turn Around

TAT starts the day received by the lab, if received by 4:30pm

Ben Belill

03E1558090

JRU 108H

Project Number:

roject Name:

Revised Date: 08/25/2020 Rev 2020 2	De				
		Ō			5
		4		0	3
		7	रहे । । । । । । । । । । । । । । । । । । ।	Duniela Glat	(cache)
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relipquished by: (Signature)
	losses are due to circumstances beyond the control se terms will be enforced unless previously negotiated.	Incurred by the client if such losses are due to circu. Xenco, but not analyzed. These terms will be enforced.	ty for any losses or expenses sample submitted to Eurofins	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco, A minimum charge of \$35.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	of service. Eurofins Xenco will be liable only for th of Eurofins Xenco. A minimum charge of \$85.00 wi
	andard terms and conditions	enco, its affiliates and subcontractors. It assigns st	client company to Eurofins Xe	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofina Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	Notice: Signature of this document and relinquishn
470 / 7471	g TI U Hg: 1631 / 245.1 / 7470 / 7471	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	CRA Sb As Ba Be		Circle Method(s) and Metal(s) to be analyzed
in U V Zn	Mo Ni K Se Ag SiO ₂ Na Sr Tl S	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn	Al Sb As Ba Be B		Total 200.7 / 6010 200.8 / 6020:

NaOH+Ascorbic Acid: SAPC Zn Acetate+NaOH: Zn Na₂S₂O₃: NaSO₃ NaHSO, NABIS

Sample Comments

Cost Center: 1139071001

NAPP2217831599 Incident Number Work Order No:

11/2/2022 (Rev. 1)

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3258-1 SDG Number: 03E1558090

Login Number: 3258 **List Source: Eurofins Carlsbad**

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3258-1

 SDG Number: 03E1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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

8

3

11

10

14



ANALYTICAL REPORT

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

Laboratory Job ID: 890-3259-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

Revision: 1

For:

🗱 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

J. KRAMER

Authorized for release by: 11/2/2022 4:37:12 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Have a Question?

Ask
The
Expert

..... LINKS

EOL

Review your project results through

Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 3/11/2024 11:17:01 AM

recount rolate only to

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

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3259-1
SDG: 03E1558090

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receipt Checklists	18

Definitions/Glossary

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC Qualifier

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

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis %R Percent Recovery **CFL** Contains Free Liquid Colony Forming Unit **CFU** Contains No Free Liquid CNF **DER** Duplicate Error Ratio (normalized absolute difference) Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

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)

Too Numerous To Count **TNTC**

Case Narrative

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3259-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3259-1

REVISION

The report being provided is a revision of the original report sent on 10/31/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The sample was received on 10/21/2022 10:55 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: BG01 (890-3259-1).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control limits.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-38417 and analytical batch 880-38323 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37579 and analytical batch 880-37788 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.

3

_

6

9

IU

12

15

114

Eurofins Carlsbad 11/2/2022 (Rev. 1)

Client Sample Results

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: BG01 Lab Sample ID: 890-3259-1

Date Collected: 10/20/22 14:35 Date Received: 10/21/22 10:55

Matrix: Solid

Sample Depth: 4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Toluene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 03:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			10/26/22 14:13	10/29/22 03:38	1
1,4-Difluorobenzene (Surr)	100		70 - 130			10/26/22 14:13	10/29/22 03:38	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/30/22 21:36	1
	_	•	DRO) (GC)					
	_	Organics (I	DRO) (GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	_	Qualifier	, , ,	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/25/22 11:30	Dil Fac
Analyte Total TPH	<50.0	Qualifier U	RL 50.0		_ <u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: SW846 8015B NM - D	Result <50.0	Qualifier U	RL 50.0		<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - December 2015 Analyte Gasoline Range Organics	Result <50.0	Qualifier U Organics Qualifier	RL 50.0 (DRO) (GC)	mg/Kg		<u> </u>	10/25/22 11:30	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - December 2015 NM - Decembe	Result <50.0 Piesel Range Result	Qualifier U Organics Qualifier U	70.0 (DRO) (GC) RL	mg/Kg Unit		Prepared 11/01/22 15:08	10/25/22 11:30 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - December 2015 NM - Decembe	Result <50.0 Diesel Range Result <50.0	Qualifier U Organics Qualifier U	RL	mg/Kg Unit mg/Kg		Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - DANALYTE Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 Diesel Range Result <50.0 <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 11/01/22 15:08 11/01/22 15:08	10/25/22 11:30 Analyzed 11/02/22 05:25 11/02/22 05:25	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate	Result <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 11/02/22 05:25	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <50.0	Qualifier U Organics Qualifier U U	RL 50.0 (DRO) (GC) RL 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 Analyzed	Dil Face 1 1 1 Dil Face
Analyte Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <50.0	Qualifier U Organics Qualifier U U U Qualifier	RL 50.0 (DRO) (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 11/02/22 05:25 Analyzed 11/02/22 05:25	Dil Fac
Method: SW846 8015 NM - Did Analyte Total TPH Method: SW846 8015B NM - Did Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: MCAWW 300.0 - Anic Analyte	Result <50.0	Qualifier U Organics Qualifier U U U Qualifier	RL 50.0 (DRO) (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 11/01/22 15:08 11/01/22 15:08 11/01/22 15:08 Prepared 11/01/22 15:08	Analyzed 11/02/22 05:25 11/02/22 05:25 11/02/22 05:25 Analyzed 11/02/22 05:25	

Surrogate Summary

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percer	t Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20605-A-1-E MS	Matrix Spike	101	92	
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90	
890-3259-1	BG01	122	100	
LCS 880-37911/1-A	Lab Control Sample	99	91	
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91	
MB 880-37911/5-A	Method Blank	102	87	
MB 880-38021/5-A	Method Blank	72	60 S1-	

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

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

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
		1CO1	OTPH1					
Lab Sample ID	Client Sample ID	(70-130)	(70-130)					
890-3259-1	BG01	86	90					
890-3335-A-1-C MS	Matrix Spike	88	86					
890-3335-A-1-D MSD	Matrix Spike Duplicate	79	76					
LCS 880-38417/2-A	Lab Control Sample	101	106					
LCSD 880-38417/3-A	Lab Control Sample Dup	90	95					
MB 880-38417/1-A	Method Blank	92	99					
Surrogate Legend								

Page 6 of 19

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	IVIB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed
4-Bromofluorobenzene (Surr)	102	70 - 130	10/26/22 14:13	10/29/22 01:12
1,4-Difluorobenzene (Surr)	87	70 - 130	10/26/22 14:13	10/29/22 01:12

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

Prep Batch: 37911

Lab Sample ID: LCS 880-37911/1-A Matrix: Solid

Analysis Batch: 38089

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-37911/2-A **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 38089

•	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07938		mg/Kg		79	70 - 130	6	35
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35
o-Xvlene	0.100	0.08950		ma/Ka		89	70 - 130	4	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Analysis Batch: 38089										tch: 37911
-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130	
Toluene	< 0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130	

Eurofins Carlsbad

Client Sample ID: Matrix Spike

Dil Fac

Prep Batch: 37911

QC Sample Results

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 880-20605-A-1-E MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38089

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1	0.100	0.07637		mg/Kg		76	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1440		mg/Kg		72	70 - 130	
o-Xylene	<0.00201	U	0.100	0.08398		mg/Kg		84	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 101 70 - 130 1,4-Difluorobenzene (Surr) 70 - 130 92

Lab Sample ID: 880-20605-A-1-F MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 38089									Prep E	atch: 3	37911
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0990	0.06610	F1	mg/Kg		66	70 - 130	20	35
Toluene	<0.00201	U F1	0.0990	0.06481	F1	mg/Kg		65	70 - 130	20	35
Ethylbenzene	<0.00201	U F1	0.0990	0.06337	F1	mg/Kg		64	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1224	F1	mg/Kg		62	70 - 130	16	35
o-Xylene	<0.00201	U	0.0990	0.07052		mg/Kg		71	70 - 130	17	35

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 102 70 - 130 70 - 130 1,4-Difluorobenzene (Surr) 90

M

.ab Sample ID: MB 880-38021/5-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 38089	Prep Batch: 38021
MB MB	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
	MR	MR						
	Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	Benzene <0.00200	Senzene <0.00200 U	Benzene <0.00200 U 0.00200	Benzene <0.00200 U 0.00200 mg/Kg Toluene <0.00200	Benzene <0.00200 U 0.00200 mg/Kg Toluene <0.00200	Benzene <0.00200 U 0.00200 mg/Kg 10/27/22 13:34 Toluene <0.00200	Benzene <0.00200 U 0.00200 mg/Kg 10/27/22 13:34 10/28/22 13:48 Toluene <0.00200

	1110 1110				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72	70 - 130	10/27/22 13:34	10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60 S1-	70 - 130	10/27/22 13:34	10/28/22 13:48	1

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

Lab Sample ID: MB 880-38417/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 38323** Prep Batch: 38417

7 man , 010 = 010 m 000 = 0								
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1

(GRO)-C6-C10

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: MB 880-38417/1-A **Client Sample ID: Method Blank** Matrix: Solid **Prep Type: Total/NA** Prep Batch: 38417 **Analysis Batch: 38323**

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/01/22 21:10	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			11/01/22 15:08	11/01/22 21:10	1
o-Terphenvl	99		70 - 130			11/01/22 15:08	11/01/22 21:10	1

Lab Sample ID: LCS 880- Matrix: Solid Analysis Batch: 38323	3041772-A					Cileii	l Jai	ilipie ib	: Lab Control Sample Prep Type: Total/N/ Prep Batch: 3841
			Spike	LCS	LCS				%Rec
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1076		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1008		mg/Kg		101	70 - 130
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	101		70 - 130						
o-Terphenyl	106		70 - 130						

Lub Guilipic ID. LOOD GOO GOT 1770 A	Cample IB: ECCB CCC CC+1170-A			Cheft Cample 15: Lab Control Cample Bup							
Matrix: Solid							Prep Ty	pe: Tot	al/NA		
Analysis Batch: 38323							Prep E	Batch: 3	38417		
	Spike	LCSD	LCSD				%Rec		RPD		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130	1	20		
Diesel Range Organics (Over C10-C28)	1000	910.4		mg/Kg		91	70 - 130	10	20		

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-3335 Matrix: Solid Analysis Batch: 38323	-A-1-C MS						CI	ient Sa	mple ID: Matrix Spike Prep Type: Total/NA Prep Batch: 38417
	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	997	812.4		mg/Kg		79	70 - 130
Diesel Range Organics (Over C10-C28)	77.7	F1	997	799.4		mg/Kg		72	70 - 130
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	88		70 - 130						
o-Terphenyl	86		70 - 130						

Eurofins Carlsbad

11/2/2022 (Rev. 1)

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3335-A-1-D MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Analysis Batch: 38323

Prep Type: Total/NA Prep Batch: 38417

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier D %Rec Limits **RPD** Limit Analyte Unit <50.0 U Gasoline Range Organics 999 984.3 mg/Kg 96 70 - 130 19 20 (GRO)-C6-C10 Diesel Range Organics (Over

C10-C28)

999 702.0 F1 62 70 - 130 77.7 F1 mg/Kg 13

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	76		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

MB MB

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			10/25/22 19:00	1

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	242.4		mg/Kg	_	97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A **Client Sample ID: Lab Control Sample Dup Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.5		mg/Kg	_	97	90 - 110	0	20

Lab Sample ID: 890-3252-A-43-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	853	F1	250	1060	F1	ma/Ka		83	90 - 110	

Lab Sample ID: 890-3252-A-43-C MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

Analysis Dateil. 01100												
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	853	F1	250	1030	F1	mg/Kg		71	90 - 110	3	20	

QC Association Summary

Client: Ensolum Job ID: 890-3259-1 Project/Site: JRU 108H SDG: 03E1558090

GC VOA

Pre	p Bat	ch:	37911	ĺ
------------	-------	-----	-------	---

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8015 NM	

Analysis Batch: 38323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8015B NM	38417
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015B NM	38417
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38417
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38417
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38417
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38417

Prep Batch: 38417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Total/NA	Solid	8015NM Prep	
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3259-1	BG01	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

3

5

Q

9

12

13

1/

Lab Chronicle

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: 890-3259-1

Date Collected: 10/20/22 14:35

Date Received: 10/21/22 10:55

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 03:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38190	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37811	10/25/22 11:30	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.00 g 1 uL	10 mL 1 uL	38417 38323	11/01/22 15:08 11/02/22 05:25	DM SM	EET MID EET MID
·	,			'						
Soluble Soluble	Leach Analysis	DI Leach 300.0		10	5 g	50 mL	37579 37788	10/22/22 12:59 10/25/22 20:49		EET MID EET MID

Laboratory References:

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

Eurofins Carlsbad

1

3

5

9

- 10

40

14

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3259-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Program Identification Numb		Identification Number	Expiration Date	
Texas	NELAP T104704400-22-24		T104704400-22-24	06-30-23	
The following analyte	s are included in this ren	ort but the laboratory is r	not certified by the governing authority.	This list may include analytes for	
,		ort, but the laboratory is i	iot certified by the governing authority.	This list may include analytes for	
the agency does not		ort, but the laboratory is i	lot certilled by the governing authority.	This list may include analytes for	
		Matrix	Analyte	This list may include analytes for	
the agency does not o	offer certification.	•	, , ,	This list may include analytes for	

5

8

10

12

13

14

Method Description

Total BTEX Calculation

Microextraction

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

Deionized Water Leaching Procedure

Anions, Ion Chromatography

Closed System Purge and Trap

Method Summary

Client: Ensolum

Method

8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

8021B Total BTEX

Project/Site: JRU 108H

Job ID: 890-3259-1

EET MID

SDG: 03E1558090

Protocol	Laboratory
SW846	EET MID
TAL SOP	EET MID
SW846	EET MID
SW846	EET MID
MCAWW	EET MID
SW846	EET MID
SW846	EET MID

ASTM

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

Page 15 of 19

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3259-1

SDG: 03E1558090

Lab Sample ID Client Sample ID Matrix Collected Received Depth 890-3259-1 BG01 Solid 10/20/22 14:35 10/21/22 10:55 4'

City, State ZIP:

3122 National parks Hwy Carlsbad, NM 88220

Address: City, State ZIP:

Bill to: (if different)
Company Name:

XTO Energy, Inc.

Garrett Green

3104 E. Green Street Carlsbad, NM 88220 roject Manager: ompany Name:

Ensolum, LLC

Ben Belill

14

Chain of Custody 1, TX (281) 240-4200, Dallas, TX (214) 90

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

www.xenco.com Page 1_of 1 Work Order Comments Program: UST/PST PRP Brownfields RRC Superfund State of Project:

Email: bbetili@ensclum.com Turn Around	Turn Around Rush Code Rush Ite: Ite: Ite: Ite: Ite: Ite: Ite: Ite:	
→ 0 0 0 Parameters 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C	ANALYSIS REQUEST ANALYSIS REQUEST Cont Parameters ANALYSIS REQUEST ANALYSIS REQUEST No. Cont Parameters ANALYSIS REQUEST A
	r Custo	Deliverables: EDD

Work Order No:

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3259-1 SDG Number: 03E1558090

Login Number: 3259 **List Source: Eurofins Carlsbad**

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Released to Imaging: 3/11/2024 11:17:01 AM

11/2/2022 (Rev. 1)

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3259-1

 SDG Number: 03E1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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

4



Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3260-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

💸 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill



Authorized for release by: 10/31/2022 9:39:13 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

.....LINKS

Review your project results through EOL

Have a Question?



Visit us at:

www.eurofinsus.com/Env Released to Imaging: 3/11/2024 11:17:01 AM

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

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

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-3260-1
SDG: 03E1558090

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	6
QC Sample Results	7
QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receipt Checklists	18

2

3

4

6

8

10

12

13

Definitions/Glossary

Job ID: 890-3260-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC VOA

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

GC Semi VOA

F1 MS and/or MSD recovery exceeds control limits. F2 MS/MSD RPD exceeds control limits Indicates the analyte was analyzed for but not detected.

Qualifier Description

Qualifier Description

Percent Recovery

HPLC/IC Qualifier

Qualifier

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

Glossary

%R

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit**

Presumptive **PRES** QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3260-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3260-1

Receipt

The sample was received on 10/21/2022 10:55 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: BG01 (890-3260-1).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control limits.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37617 and analytical batch 880-37611 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.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37579 and analytical batch 880-37788 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.

1

3

5

_

8

11

13

Matrix: Solid

Lab Sample ID: 890-3260-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BG01

Date Collected: 10/20/22 14:40 Date Received: 10/21/22 10:55

Sample Depth: 6'

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00216		0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 03:59	
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 03:59	
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 03:59	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	108		70 - 130			10/26/22 14:13	10/29/22 03:59	
1,4-Difluorobenzene (Surr)	92		70 - 130			10/26/22 14:13	10/29/22 03:59	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/30/22 21:36	
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) ((GC)					
	•	ics (DRO) (GC)	Unit	D	Prepared	Analyzed	Dil Fa
Method: SW846 8015 NM - Diese Analyte Total TPH	•	Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/25/22 11:30	
Analyte Total TPH	Result <50.0	Qualifier U	RL 50.0		<u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.0 sel Range Orga	Qualifier U	RL 50.0		<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.0 sel Range Orga	Qualifier Unics (DRO) Qualifier	RL 50.0	mg/Kg			10/25/22 11:30	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <50.0 sel Range Orga Result	Qualifier Unics (DRO) Qualifier	RL 50.0 (GC)	mg/Kg		Prepared	10/25/22 11:30 Analyzed	
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.0 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	RL 50.0 (GC)	mg/Kg		Prepared	10/25/22 11:30 Analyzed	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0	Qualifier U nics (DRO) Qualifier U	RL 50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/24/22 08:52 10/24/22 08:52	10/25/22 11:30 Analyzed 10/24/22 19:15 10/24/22 19:15	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 sel Range Orga Result <50.0	Qualifier U nics (DRO) Qualifier U	RL 50.0 (GC) RL 50.0	mg/Kg Unit mg/Kg		Prepared 10/24/22 08:52	10/25/22 11:30 Analyzed 10/24/22 19:15	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0	Qualifier U nics (DRO) Qualifier U	RL 50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/24/22 08:52 10/24/22 08:52	10/25/22 11:30 Analyzed 10/24/22 19:15 10/24/22 19:15	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.0	Qualifier U nics (DRO) Qualifier U U	RL 50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/24/22 08:52 10/24/22 08:52 10/24/22 08:52	Analyzed 10/24/22 19:15 10/24/22 19:15	Dil Fa
Analyte	Result <50.0	Qualifier U nics (DRO) Qualifier U U	RL 50.0 (GC) RL 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/24/22 08:52 10/24/22 08:52 10/24/22 08:52 Prepared	Analyzed 10/24/22 19:15 10/24/22 19:15 10/24/22 19:15 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/24/22 08:52 10/24/22 08:52 10/24/22 08:52 Prepared 10/24/22 08:52	10/25/22 11:30 Analyzed 10/24/22 19:15 10/24/22 19:15 Analyzed 10/24/22 19:15	Dil Fa

50.5

mg/Kg

4650

Eurofins Carlsbad

10/25/22 20:57

Surrogate Summary

Client: Ensolum Job ID: 890-3260-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-20605-A-1-E MS	Matrix Spike	101	92
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90
890-3260-1	BG01	108	92
LCS 880-37911/1-A	Lab Control Sample	99	91
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91
MB 880-37911/5-A	Method Blank	102	87
MB 880-38021/5-A	Method Blank	72	60 S1-
Surrogate Legend			

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-3253-A-1-H MS	Matrix Spike	95	92	
890-3253-A-1-I MSD	Matrix Spike Duplicate	88	84	
890-3260-1	BG01	84	89	
_CS 880-37617/2-A	Lab Control Sample	105	110	
LCSD 880-37617/3-A	Lab Control Sample Dup	108	114	
MB 880-37617/1-A	Method Blank	80	94	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3260-1 SDG: 03E1558090 Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid Analysis Batch: 38089 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	MB	мв						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepare	ed	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	10/26/22 1	14:13	10/29/22 01:12	1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/26/22 1	14:13	10/29/22 01:12	1

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Prep Type: Total/NA Prep Batch: 37911

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	
I and the second								

LCS LCS

Surrogate	%Recovery Qualifie	er Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	91	70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07938		mg/Kg		79	70 - 130	6	35
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35
o-Xylene	0.100	0.08950		mg/Kg		89	70 - 130	4	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1.4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 37911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130	
Toluene	<0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130	

Prep Type: Total/NA

70 - 130

70 - 130

71

16

17

Prep Batch: 37911

QC Sample Results

Client: Ensolum Job ID: 890-3260-1 SDG: 03E1558090 Project/Site: JRU 108H

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

Lab Sample ID: 880-20605-A-1-E MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 38089

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1	0.100	0.07637		mg/Kg		76	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1440		mg/Kg		72	70 - 130	
o-Xylene	<0.00201	U	0.100	0.08398		mg/Kg		84	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	101	70 - 130
1,4-Difluorobenzene (Surr)	92	70 - 130

Lab Sample ID: 880-20605-A-1-F MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Matrix: Solid

m-Xylene & p-Xylene

o-Xylene

Analysis Batch: 38089									Prep	Batch:	37911
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0990	0.06610	F1	mg/Kg		66	70 - 130	20	35
Toluene	< 0.00201	U F1	0.0990	0.06481	F1	mg/Kg		65	70 - 130	20	35
Ethylbenzene	<0.00201	U F1	0.0990	0.06337	F1	mg/Kg		64	70 - 130	19	35

0.1224 F1

0.07052

0.198

0.0990

MSD MSD

<0.00402 UF1

<0.00201 U

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: MB 880-38021/5-A

Matrix: Solid

Analysis Batch: 38089

	Client Sample ID: Method Blank
	Prep Type: Total/NA
	Prep Batch: 38021
MB MB	

mq/Kq

mg/Kg

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72	70 - 130	10/27/22 13:34	10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60 S1-	70 - 130	10/27/22 13:34	10/28/22 13:48	1

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

Lab Sample ID: MB 880-37617/1-A

Matrix: Solid

Analysis Batch: 37611

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 37617

мв мв Result Qualifier RL Unit Prepared <50.0 U 50.0 mg/Kg 10/24/22 08:52 10/24/22 10:35 Gasoline Range Organics

(GRO)-C6-C10

Eurofins Carlsbad

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-37617/1-A

Matrix: Solid

Analysis Batch: 37611

MB MB

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37617

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			10/24/22 08:52	10/24/22 10:35	1
o-Terphenyl	94		70 - 130			10/24/22 08:52	10/24/22 10:35	1

Lab Sample ID: LCS 880-37 Matrix: Solid Analysis Batch: 37611	617/2-A						Client	Sample		trol Sample be: Total/NA atch: 37617
-			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	1169		mg/Kg		117	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	1015		mg/Kg		102	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	105		70 - 130							
o-Terphenyl	110		70 - 130							

Lab Sample ID: LCSD 880-37617/3-A			Client Sample ID: Lab Control Sample Dup
Matrix: Solid			Prep Type: Total/NA
Analysis Batch: 37611			Prep Batch: 37617
	0	1000 1000	0/ B BBB

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	1158		mg/Kg		116	70 - 130	1	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	1018		mg/Kg		102	70 - 130	0	20	
C10-C28)										

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: 890-3253-A-1-H	MS							Client	Sample ID:	Matrix Spike
Matrix: Solid									Prep Ty	ype: Total/NA
Analysis Batch: 37611									Prep	Batch: 37617
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1 F2	998	1543	F1	mg/Kg		151	70 - 130	
, , , ,	40.0		000	040 =				- 4	70 400	

Lab Sample ID: 890-3253-A-1-I MSD

Client: Ensolum Job ID: 890-3260-1 Project/Site: JRU 108H SDG: 03E1558090

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

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 37617

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8	U F1 F2	998	1075	F2	mg/Kg		104	70 - 130	36	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.8	U	998	782.1		mg/Kg		78	70 - 130	4	20
C10-C28)											

Matrix: Solid

Analysis Batch: 37611

MSD MSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 70 - 130 88 o-Terphenyl 84 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

мв мв Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 10/25/22 19:00

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	242.4		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	243.5		mg/Kg		97	90 - 110	0	20	

Lab Sample ID: 890-3252-A-43-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	853	F1	250	1060	F1	ma/Ka		83	90 110	

Lab Sample ID: 890-3252-A-43-C MSD

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	853	F1	250	1030	F1	mg/Kg		71	90 - 110	3	20

Eurofins Carlsbad

Prep Type: Soluble

Client Sample ID: Matrix Spike Duplicate

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 37911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8015B NM	37617
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015B NM	37617
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	37617
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	37617
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	37617
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	37617

Prep Batch: 37617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8015NM Prep	
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 37812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Total/NA	Solid	8015 NM	

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3260-1	BG01	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3252-A-43-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3252-A-43-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

5

3

5

R

9

10

12

13

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: BG01 Lab Sample ID: 890-3260-1

Date Collected: 10/20/22 14:40

Date Received: 10/21/22 10:55

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 03:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38191	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37812	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	37617	10/24/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37611	10/24/22 19:15	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 20:57	CH	EET MID

Laboratory References:

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

3

4

5

9

10

12

13

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-3260-1 Project/Site: JRU 108H SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority Texas		ogram	Identification Number	Expiration Date 06-30-23	
		ELAP	T104704400-22-24		
The following englytes	and the street and the state of a contract that				
the agency does not of	• '	it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for	
,	• '	t the laboratory is not certifi Matrix	ed by the governing authority. This list ma	ay include analytes for	
the agency does not of	fer certification.	•	, , ,	ay include analytes for	

EET MID

ASTM

Method Summary

 Client: Ensolum
 Job ID: 890-3260-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Protocol References:

DI Leach

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

Deionized Water Leaching Procedure

Laboratory References:

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

Eurofins Carlsbad

3

4

O

9

10

12

13

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3260-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3260-1	BG01	Solid	10/20/22 14:40	10/21/22 10:55	6'

Circle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM

service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any re tice: Signature of this document and relinquishment of samples constitutes a valid purchase o

Relinquished by: (Signature)

Received by: (Signature)

021120

1980

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020.2

eurofins

Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 98 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

0.00	www.xenco.com Page1_ of1_
	Work Order Comments
	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
	State of Project:
	Reporting: Level II Level III PST/UST TRRP Level IV
	Deliverables: EDD

	Time Sampled Depth Comp Cont CT PP 1440 6' Grab/ 1 X X	Due Date: TAT starts the day received by the lab, if received by 4:30pm Wet Ice: (Yes) No Parameters RIDES (EPA: 300.0) 015)	Turn Around Pres. Routine Rush Code	Address: 3104 E. Green Street City, State ZIP: Carlsbad, NM 88220 Email: bbelil@ensolum.com
	× BTEX	890-3260 Chain of Custody	ANALYSIS REQUEST	M 88220 State of Project: Reporting: Level III ☐ PST/UST ☐ TRRP ☐ Deliverables: EDD ☐ ADaPT ☐ Other:
Incident Number:	Sample Comments Cost Center: 1139071001	Cool: Cool MeOH: Me HCL: HC HNO3: HN H2SO4: H2 NaOH: Na H3PO4: HP NaHSO4: NABIS Na2S2O3: NaSO3 Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC	Preservative Codes None: NO DI Water: H ₂ O	□PST/UST □ TRRP □ Level IV □ ADaPT □ Other:

SAMPLE RECEIPT Samples Received Intact:

Temp Blank: (Yes) No

Yes No

Wet Ice:

ooler Custody Seals:

Yes No NIA

Correction Factor: Thermometer ID:

ample Custody Seals:

Yes No

NA

Temperature Reading: Corrected Temperature:

Sample Identification BG01

Matrix

Date Sampled 10/20/2022

Time Sampled

S

Project Number:

Project Name:

City, State ZIP:

9898540852 Carlsbad, NM 88220 3122 National parks Hwy

Sampler's Name:

oject Location:

EDDY COUNTY, NM

Ben Belill

03E1558090

JRU 108H

Project Manager:

Ben Belill

Bill to: (if different)

Company Name:

XTO Energy, Inc. Garrett Green

Company Name: Address:

Ensolum, LLC

Samples are received within Holding Time (excluding tests with immediate

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

Containers requiring zero headspace have no headspace or bubble is

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3260-1

SDG Number: 03E1558090

Login Number: 3260 List Source: Eurofins Carlsbad

List Number: 1

HTs)

MS/MSDs

<6mm (1/4").

Creator: Stutzman, Amanda

Sample containers have legible labels.

Containers are not broken or leaking.

Sample bottles are completely filled.

Sample Preservation Verified.

Sample collection date/times are provided.

Appropriate sample containers are used.

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

True

True

True

True

N/A

True N/A

True

N/A

Refer to Job Narrative for details.

14

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3260-1

SDG Number: 03E1558090

List Source: Eurofins Midland List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

Login Number: 3260

List Number: 2

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

<6mm (1/4").



3

4

0

<u>/</u>

10

12

4 4

Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3261-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

Revision: 1

For:

🗱 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

SKRAMER

Authorized for release by: 11/2/2022 4:39:15 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Review your project results through

..... LINKS

Have a Question?



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 3/11/2024 11:17:01 AM

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.

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3261-1
SDG: 03E1558090

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	9
QC Sample Results	10
QC Association Summary	16
Lab Chronicle	19
Certification Summary	21
Method Summary	22
Sample Summary	23
Chain of Custody	24
Receipt Checklists	25

Definitions/Glossary

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

00		$\overline{}$	A
GU	· V	U,	А

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

GC Semi 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.
LIDL O/IO	

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

Glossary

Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
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)	

EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Co
145.4	M: : D : : ! A :: :: /D :

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

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 sho
--

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

PRES	Presumptive
QC	Quality Control

RER	Relative Error Ratio (Radiochemistry)
-----	---------------------------------------

RL	Reporting Limit or Requested Limit ((Radiochemistry)
----	--------------------------------------	-----------------	---

RPD	D 1 4 D D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1	a measure of the relative difference between two points
RPD	Relative Percent Litterence	a measure of the relative difference hetween two hoints

=	rtolativo i ordont Billorondo, a model
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3261-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3261-1

REVISION

The report being provided is a revision of the original report sent on 10/31/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Report revision history

Receipt

The samples were received on 10/21/2022 10:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3261-1), PH01 (890-3261-2), PH01 (890-3261-3), PH01 (890-3261-4) and PH01 (890-3261-5).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-3261-1), PH01 (890-3261-2) and PH01 (890-3261-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-37617 and analytical batch 880-37611 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.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-38417 and analytical batch 880-38323 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

2

3

5

8

4.0

1 0

13

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH01 Lab Sample ID: 890-3261-1

Matrix: Solid

Date Collected: 10/20/22 11:50 Date Received: 10/21/22 10:55

Sample Depth: 2'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0498	U	0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Toluene	<0.0498	U	0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Ethylbenzene	0.120		0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
m-Xylene & p-Xylene	1.90		0.0996	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
o-Xylene	0.380		0.0498	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Xylenes, Total	2.28		0.0996	mg/Kg		10/26/22 14:13	10/29/22 08:31	25
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	245	S1+	70 - 130			10/26/22 14:13	10/29/22 08:31	25
1,4-Difluorobenzene (Surr)	105		70 - 130			10/26/22 14:13	10/29/22 08:31	25
Method: TAL SOP Total BT	EX - Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	2.40		0.0996	mg/Kg			10/30/22 21:36	1
Method: SW846 8015 NM -	Diesel Range	Organics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	6370		50.0	mg/Kg			10/25/22 11:30	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	935		50.0	mg/Kg		10/24/22 08:52	10/24/22 16:50	1
Diesel Range Organics (Over C10-C28)	3250		50.0	mg/Kg		10/24/22 08:52	10/24/22 16:50	1
Oll Range Organics (Over C28-C36)	2180		50.0	mg/Kg		10/24/22 08:52	10/24/22 16:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			10/24/22 08:52	10/24/22 16:50	1
o-Terphenyl	86		70 - 130			10/24/22 08:52	10/24/22 16:50	1

Method: MCAWW 300.0 - Anior	ns, Ion Chr	omatograph	ny - Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2870		25.0	mg/Kg			10/25/22 21:06	5

Client Sample ID: PH01 Lab Sample ID: 890-3261-2 Date Collected: 10/20/22 11:55 Matrix: Solid

Date Received: 10/21/22 10:55

Sample Depth: 3'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0497	U	0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
Toluene	2.13		0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
Ethylbenzene	6.51		0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
m-Xylene & p-Xylene	14.6		0.0994	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
o-Xylene	9.38		0.0497	mg/Kg		10/26/22 14:13	10/29/22 08:51	25
Xylenes, Total	24.0		0.0994	mg/Kg		10/26/22 14:13	10/29/22 08:51	25

Job ID: 890-3261-1 SDG: 03E1558090

Matrix: Solid

Client: Ensolum Project/Site: JRU 108H

Result Qualifier

4010

27.1

Lab Sample ID: 890-3261-2

Analyzed

10/25/22 11:30

Prepared

Client Sample ID: PH01

Date Collected: 10/20/22 11:55 Date Received: 10/21/22 10:55

Sample Depth: 3'

Analyte

Total TPH

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	426	S1+	70 - 130	10/26/22 14:13	10/29/22 08:51	25
1,4-Difluorobenzene (Surr)	89		70 - 130	10/26/22 14:13	10/29/22 08:51	25

Method: TAL SOP Total BTEX -	Total BTEX Calcul	ation			
1,4-Difluorobenzene (Surr)	89	70 - 130	10/26/22 14:13	10/29/22 08:51	25
4-Bromofluorobenzene (Surr)	426 S1+	70 - 130	10/26/22 14:13	10/29/22 08:51	25

RL

Unit

mg/Kg

Lotal BTEX	32.6	0.0994	mg/Kg			10/30/22 21:36	1
Method: SW846 8015 NM - Di	iesel Range Organics (D	RO) (GC)					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

50.0

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	848	50.0	mg/Kg		10/24/22 08:52	10/24/22 17:11	1
Diesel Range Organics (Over C10-C28)	1970	50.0	mg/Kg		10/24/22 08:52	10/24/22 17:11	1
Oll Range Organics (Over C28-C36)	1190	50.0	mg/Kg		10/24/22 08:52	10/24/22 17:11	1
Surrogate	%Recovery Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surroyale	70Kecovery	Qualifier	LIIIIII	rieparet	i Allalyzeu	DII Fac
1-Chlorooctane	94		70 - 130	10/24/22 08	:52 10/24/22 17:11	1
o-Terphenyl	77		70 - 130	10/24/22 08	:52 10/24/22 17:11	1
_						

Method: MCAWW 300.0 - Anion	s, Ion Chromatograph	y - Soluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12300	100	mg/Kg			10/25/22 21:14	20

Lab Sample ID: 890-3261-3 **Client Sample ID: PH01** Date Collected: 10/20/22 12:00 **Matrix: Solid**

Date Received: 10/21/22 10:55

Sample Depth: 4'

Total BTEX

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0499	U	0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
oluene	1.76		0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
Ethylbenzene	3.84		0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
n-Xylene & p-Xylene	13.0		0.0998	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
o-Xylene	8.51		0.0499	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
(ylenes, Total	21.5		0.0998	mg/Kg		10/26/22 14:13	10/29/22 09:12	25
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
I-Bromofluorobenzene (Surr)	332	S1+	70 - 130			10/26/22 14:13	10/29/22 09:12	25
,4-Difluorobenzene (Surr)	87		70 - 130			10/26/22 14:13	10/29/22 09:12	25

Eurofins Carlsbad

10/30/22 21:36

0.0998

mg/Kg

Dil Fac

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH01 Lab Sample ID: 890-3261-3

79

Matrix: Solid

10/24/22 08:52 10/24/22 17:31

Date Received: 10/21/22 10:55

Date Collected: 10/20/22 12:00

Sample Depth: 4'

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2700	49.9	mg/Kg			10/25/22 11:30	1
Method: SW846 8015B NM - Di	esel Range Organics (DRO) (GC)					

Analyte	Result Quali	fier RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	531	49.9	mg/Kg		10/24/22 08:52	10/24/22 17:31	1
Diesel Range Organics (Over C10-C28)	1340	49.9	mg/Kg		10/24/22 08:52	10/24/22 17:31	1
Oll Range Organics (Over C28-C36)	824	49.9	mg/Kg		10/24/22 08:52	10/24/22 17:31	1
Surrogate	%Recovery Quali	fier Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89	70 - 130			10/24/22 08:52	10/24/22 17:31	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	3160		25.2	mg/Kg			10/25/22 21:23	5

70 - 130

Lab Sample ID: 890-3261-4 **Client Sample ID: PH01 Matrix: Solid**

Date Collected: 10/20/22 12:10 Date Received: 10/21/22 10:55

Sample Depth: 6'

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Toluene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 07:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			10/26/22 14:13	10/29/22 07:49	1
1,4-Difluorobenzene (Surr)	101		70 - 130			10/26/22 14:13	10/29/22 07:49	1

Method: TAL SOP Total BTEX - Total BTEX Calculation									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Total BTEX	<0.00398	U	0.00398	mg/Kg			10/30/22 21:36	1

Method: SW846 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			10/25/22 11:30	1

L	– 10tal 11 11 –	٠٥٥.٥	O	30.0	mg/rtg			10/23/22 11.30	'
	_ Method: SW846 8015B NM - Di	esel Range	Organics ((DRO) (GC)					
١	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 05:47	1
	Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 05:47	1
١	OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 05:47	1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: PH01 Lab Sample ID: 890-3261-4

Date Collected: 10/20/22 12:10 Matrix: Solid
Date Received: 10/21/22 10:55

Sample Depth: 6'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130	11/01/22 15:08	11/02/22 05:47	1
o-Terphenyl	90		70 - 130	11/01/22 15:08	11/02/22 05:47	1

 Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 26700
 250
 mg/Kg
 10/25/22 21:48
 50

Client Sample ID: PH01

Date Collected: 10/20/22 12:20

Lab Sample ID: 890-3261-5

Matrix: Solid

Date Received: 10/21/22 10:55

Sample Depth: 7'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 08:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			10/26/22 14:13	10/29/22 08:10	1
1,4-Difluorobenzene (Surr)	98		70 - 130			10/26/22 14:13	10/29/22 08:10	1

Method. IAL SOF Total BILA	- IUlai BILA	Calculati	OII					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/30/22 21:36	1

Method: SW846 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			10/25/22 11:30	1

Method: SW846 8015B NM - D	hod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 06:08	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 06:08	1	
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/01/22 15:08	11/02/22 06:08	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	83		70 - 130			11/01/22 15:08	11/02/22 06:08	1	
o-Terphenyl	87		70 - 130			11/01/22 15:08	11/02/22 06:08	1	

Method: MCAWW 300.0 - Anion	s, Ion Chroma	atography - Soluble					
Analyte	Result Qua	alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4100	50.3	mg/Kg			10/25/22 21:56	10

Eurofins Carlsbad

2

3

_

7

8

10

12

Surrogate Summary

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percent	t Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-20605-A-1-E MS	Matrix Spike	101	92	
880-20605-A-1-F MSD	Matrix Spike Duplicate	102	90	
890-3261-1	PH01	245 S1+	105	
890-3261-2	PH01	426 S1+	89	
890-3261-3	PH01	332 S1+	87	
890-3261-4	PH01	119	101	
890-3261-5	PH01	129	98	
LCS 880-37911/1-A	Lab Control Sample	99	91	
LCSD 880-37911/2-A	Lab Control Sample Dup	101	91	
MB 880-37911/5-A	Method Blank	102	87	
MB 880-38021/5-A	Method Blank	72	60 S1-	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3253-A-1-H MS	Matrix Spike	95	92	
890-3253-A-1-I MSD	Matrix Spike Duplicate	88	84	
890-3261-1	PH01	93	86	
890-3261-2	PH01	94	77	
890-3261-3	PH01	89	79	
890-3261-4	PH01	85	90	
890-3261-5	PH01	83	87	
890-3335-A-1-C MS	Matrix Spike	88	86	
890-3335-A-1-D MSD	Matrix Spike Duplicate	79	76	
LCS 880-37617/2-A	Lab Control Sample	105	110	
LCS 880-38417/2-A	Lab Control Sample	101	106	
LCSD 880-37617/3-A	Lab Control Sample Dup	108	114	
LCSD 880-38417/3-A	Lab Control Sample Dup	90	95	
MB 880-37617/1-A	Method Blank	80	94	
MB 880-38417/1-A	Method Blank	92	99	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-3261-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	10/26/22 14:13	10/29/22 01:12	1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/26/22 14:13	10/29/22 01:12	1

Lab Sample ID: LCS 880-37911/1-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484		mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: LCSD 880-37911/2-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 37911

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.07938		mg/Kg		79	70 - 130	6	35	
Toluene	0.100	0.08189		mg/Kg		82	70 - 130	7	35	
Ethylbenzene	0.100	0.08032		mg/Kg		80	70 - 130	8	35	
m-Xylene & p-Xylene	0.200	0.1556		mg/Kg		78	70 - 130	5	35	
o-Xylene	0.100	0.08950		mg/Kg		89	70 - 130	4	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

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

Prep Batch: 37911

Alialysis Datell. 30003									Liehr	Jaicii. Ji	9 1
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130		
Toluene	< 0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130		

Client: Ensolum Job ID: 890-3261-1 SDG: 03E1558090 Project/Site: JRU 108H

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

Client Sample ID: Matrix Spike Lab Sample ID: 880-20605-A-1-E MS **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 38089 Prep Batch: 37911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U F1	0.100	0.07637		mg/Kg		76	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1440		mg/Kg		72	70 - 130	
o-Xylene	<0.00201	U	0.100	0.08398		mg/Kg		84	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 101 1,4-Difluorobenzene (Surr) 92 70 - 130

Lab Sample ID: 880-20605-A-1-F MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Analysis Batch: 38089

Prep Batch: 37911 Sample Sample Spike MSD MSD %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Benzene 0.0990 0.06610 F1 70 - 130 20 35 <0.00201 UF1 mg/Kg 66 Toluene 0.0990 0.06481 F1 65 70 - 130 20 35 <0.00201 UF1 mg/Kg Ethylbenzene <0.00201 UF1 0.0990 0.06337 F1 mg/Kg 64 70 - 130 19 35 m-Xylene & p-Xylene <0.00402 UF1 0.198 0.1224 F1 mg/Kg 62 70 - 130 16 35 <0.00201 U 0.0990 0.07052 71 o-Xylene mg/Kg 70 - 13017

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 102 70 - 130 1,4-Difluorobenzene (Surr) 90

Lab Sample ID: MB 880-38021/5-A

Matrix: Solid

Analysis Batch: 38089

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1

MB MB Dil Fac Surrogate Qualifier Limits Analyzed %Recovery Prepared 4-Bromofluorobenzene (Surr) 70 - 130 10/27/22 13:34 10/28/22 13:48 72 60 S1-70 - 130 10/27/22 13:34 10/28/22 13:48 1,4-Difluorobenzene (Surr)

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

Lab Sample ID: MB 880-37617/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 37611** Prep Batch: 37617

MB MB Result Qualifier Analyte RL Unit Prepared Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 mg/Kg 10/24/22 08:52 10/24/22 10:35

(GRO)-C6-C10

Eurofins Carlsbad

Prep Type: Total/NA

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 38021

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-37617/1-A

Matrix: Solid

Analysis Batch: 37611

MB MB

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37617

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/24/22 08:52	10/24/22 10:35	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			10/24/22 08:52	10/24/22 10:35	1
o-Terphenyl	94		70 - 130			10/24/22 08:52	10/24/22 10:35	1

Lab Sample ID: LCS 880- Matrix: Solid Analysis Batch: 37611	37617/2-A					Clien	t Sai	mpie ID	: Lab Control Sample Prep Type: Total/NA Prep Batch: 37617
			Spike	LCS	LCS				%Rec
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1169		mg/Kg		117	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1015		mg/Kg		102	70 - 130
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	105		70 - 130						
o-Terphenyl	110		70 - 130						

Eus Gumpio IS: EGGS GGG GTGTT7G 74		Chont Campio is: Las Control Campio Bap							
Matrix: Solid						Prep Ty	pe: Tot	al/NA	
Analysis Batch: 37611							Prep E	Satch: 3	37617
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1158		mg/Kg		116	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	1018		mg/Kg		102	70 - 130	0	20
	Matrix: Solid Analysis Batch: 37611 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Matrix: Solid Analysis Batch: 37611 Spike Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over 1000	Matrix: Solid Analysis Batch: 37611 Spike LCSD Analyte Added Result Gasoline Range Organics 1000 1158 (GRO)-C6-C10 1000 1018 Diesel Range Organics (Over 1000 1018	Matrix: Solid Analysis Batch: 37611 Spike LCSD LCSD Analyte Added Result Qualifier Gasoline Range Organics 1000 1158 (GRO)-C6-C10 1000 1018	Matrix: Solid Analysis Batch: 37611 Spike LCSD LCSD Analyte Added Gasoline Range Organics 1000 1158 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1018 mg/Kg	Matrix: Solid Analysis Batch: 37611 Spike LCSD LCSD Analyte Added Gasoline Range Organics Result mg/Kg Unit mg/Kg D Gasoline Range Organics (GRO)-C6-C10 1000 1018 mg/Kg Diesel Range Organics (Over 1000 1018 mg/Kg	Matrix: Solid Analysis Batch: 37611 Spike LCSD LCSD Analyte Added Result Gasoline Range Organics 1000 1158 mg/Kg 116 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1018 mg/Kg 102	Matrix: Solid Analysis Batch: 37611 Prep Ty Prep E Spike LCSD LCSD KRec KRec Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 1158 mg/Kg 116 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1018 mg/Kg 102 70 - 130	Matrix: Solid Analysis Batch: 37611 Prep Type: Tot Prep Batch: 30 Prep Batch:

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: 890-3253 Matrix: Solid Analysis Batch: 37611	-A-1-H MS						C	lient Sa	mple ID: Matrix Spike Prep Type: Total/NA Prep Batch: 37617
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1 F2	998	1543	F1	mg/Kg		151	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	998	812.7		mg/Kg		81	70 - 130
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	95		70 - 130						
o-Terphenyl	92		70 - 130						

Eurofins Carlsbad

2

5

7

9

11

13

14

rofins Carisbac

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3253-A-1-I MSD

Matrix: Solid

Analysis Batch: 37611

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 37617

RPD %Rec Limits RPD Limit 20

Result Qualifier Added Result Qualifier Unit D %Rec Analyte Gasoline Range Organics <49.8 U F1 F2 998 1075 F2 mg/Kg 104 70 - 130 36 (GRO)-C6-C10 998 Diesel Range Organics (Over 782.1 mg/Kg 78 70 - 130 <498 U 4 20

MSD MSD

Spike

C10-C28)

MSD MSD

Sample Sample

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	84		70 - 130

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38417

Lab Sample ID: MB 880-38417/1-A **Matrix: Solid**

Analysis Batch: 38323

MB MB Analyte Result Qualifier RL Unit **Prepared** Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 mg/Kg 11/01/22 15:08 11/01/22 21:10 (GRO)-C6-C10 Diesel Range Organics (Over 11/01/22 15:08 11/01/22 21:10 <50.0 U 50.0 mg/Kg C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 11/01/22 15:08 11/01/22 21:10

MB MB

Surrogate	%Recovery Qualifie	r Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92	70 - 130	11/01/22 15:08	11/01/22 21:10	1
o-Terphenyl	99	70 - 130	11/01/22 15:08	11/01/22 21:10	1

Lab Sample ID: LCS 880-38417/2-A

Matrix: Solid

Analysis Batch: 38323

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 38417

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit Limits D %Rec Gasoline Range Organics 1000 70 - 130 1076 mg/Kg 108 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1008 mg/Kg 101 70 - 130 C10-C28)

C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	101	70 - 130
o-Terphenyl	106	70 - 130

Lab Sample ID: LCSD 880-38417/3-A

Matrix: Solid

Analysis Batch: 38323

Client Sample	ID:	Lab	Contro	Sample	Dup

Prep Type: Total/NA Prep Batch: 38417

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1087		mg/Kg		109	70 - 130	1	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	910.4		mg/Kg		91	70 - 130	10	20

Client: Ensolum Job ID: 890-3261-1 SDG: 03E1558090 Project/Site: JRU 108H

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

Lab Sample ID: LCSD 880-38417/3-A

Matrix: Solid

Analysis Batch: 38323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 38417

LCSD LCSD

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 90 70 - 130 o-Terphenyl 95 70 - 130

Client Sample ID: Matrix Spike Lab Sample ID: 890-3335-A-1-C MS

Matrix: Solid Prep Type: Total/NA Analysis Batch: 38323 Prep Batch: 38417

MS MS %Rec Sample Sample Spike Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <50.0 U 997 812.4 mg/Kg 79 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 77.7 F1 997 799.4 mg/Kg 72 70 - 130

C10-C28)

Analyte

MS MS %Recovery Surrogate Qualifier Limits 1-Chlorooctane 88 70 - 130 70 - 130 o-Terphenyl 86

Lab Sample ID: 890-3335-A-1-D MSD

Matrix: Solid

Analysis Batch: 38323

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38417 %Rec **RPD**

Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier Limits **RPD Analyte** Unit D %Rec I imit 70 - 130 Gasoline Range Organics <50.0 U 999 984.3 mg/Kg 96 19 20 (GRO)-C6-C10 999 70 - 130 Diesel Range Organics (Over 77.7 F1 702.0 F1 mg/Kg 62 13 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 79 70 - 130 o-Terphenyl 76

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

MB MB

Result Qualifier RL Unit Dil Fac Analyte Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 10/25/22 19:00

Lab Sample ID: LCS 880-37579/2-A

Released to Imaging: 3/11/2024 11:17:01 AM

Matrix: Solid Prep Type: Soluble Analysis Batch: 37788

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 242.4 97 mq/Kq

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 300.0 - Anions, Ion Chromatography (Continued)

Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Lab Sample ID: LCSD 880-37579/3-A **Matrix: Solid Analysis Batch: 37788**

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 243.5 mg/Kg 97 90 - 110 0 20

Lab Sample ID: 890-3261-3 MS **Client Sample ID: PH01**

Matrix: Solid Prep Type: Soluble Analysis Batch: 37788

Sample Sample Spike MS MS %Rec **Analyte** Result Qualifier Added Result Qualifier Unit D %Rec Limits Chloride 3160 1260 90 - 110 4301 mg/Kg 91

Client Sample ID: PH01 Lab Sample ID: 890-3261-3 MSD

Matrix: Solid Prep Type: Soluble Analysis Batch: 37788

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

Chloride 3160 1260 4415 100 90 - 110 20 mg/Kg

Job ID: 890-3261-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

GC VOA

Prep Batch: 37911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	5035	
890-3261-2	PH01	Total/NA	Solid	5035	
890-3261-3	PH01	Total/NA	Solid	5035	
890-3261-4	PH01	Total/NA	Solid	5035	
890-3261-5	PH01	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	nple ID Client Sample ID		Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	8021B	37911
890-3261-2	PH01	Total/NA	Solid	8021B	37911
890-3261-3	PH01	Total/NA	Solid	8021B	37911
890-3261-4	PH01	Total/NA	Solid	8021B	37911
890-3261-5	PH01	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38195

Lab Sample ID 890-3261-1	Client Sample ID PH01	Prep Type Total/NA	Matrix Solid	Method Total BTEX	Prep Batch
890-3261-2	PH01	Total/NA	Solid	Total BTEX	
890-3261-3	PH01	Total/NA	Solid	Total BTEX	
890-3261-4	PH01	Total/NA	Solid	Total BTEX	
890-3261-5	PH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	8015B NM	37617
890-3261-2	PH01	Total/NA	Solid	8015B NM	37617
890-3261-3	PH01	Total/NA	Solid	8015B NM	37617
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015B NM	37617
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	37617
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	37617
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	37617
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	37617

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC Semi VOA

Prep Batch: 37617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	8015NM Prep	
890-3261-2	PH01	Total/NA	Solid	8015NM Prep	
890-3261-3	PH01	Total/NA	Solid	8015NM Prep	
MB 880-37617/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-37617/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-37617/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3253-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3253-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 37809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Total/NA	Solid	8015 NM	
890-3261-2	PH01	Total/NA	Solid	8015 NM	
890-3261-3	PH01	Total/NA	Solid	8015 NM	
890-3261-4	PH01	Total/NA	Solid	8015 NM	
890-3261-5	PH01	Total/NA	Solid	8015 NM	

Analysis Batch: 38323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-4	PH01	Total/NA	Solid	8015B NM	38417
890-3261-5	PH01	Total/NA	Solid	8015B NM	38417
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015B NM	38417
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38417
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38417
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	38417
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	38417

Prep Batch: 38417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-4	PH01	Total/NA	Solid	8015NM Prep	
890-3261-5	PH01	Total/NA	Solid	8015NM Prep	
MB 880-38417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3335-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3335-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Soluble	Solid	DI Leach	_ <u> </u>
890-3261-2	PH01	Soluble	Solid	DI Leach	
890-3261-3	PH01	Soluble	Solid	DI Leach	
890-3261-4	PH01	Soluble	Solid	DI Leach	
890-3261-5	PH01	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3261-3 MS	PH01	Soluble	Solid	DI Leach	
890-3261-3 MSD	PH01	Soluble	Solid	DI Leach	

Eurofins Carlsbad

2

3

4

6

8

9

11

10

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

HPLC/IC

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3261-1	PH01	Soluble	Solid	300.0	37579
890-3261-2	PH01	Soluble	Solid	300.0	37579
890-3261-3	PH01	Soluble	Solid	300.0	37579
890-3261-4	PH01	Soluble	Solid	300.0	37579
890-3261-5	PH01	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3261-3 MS	PH01	Soluble	Solid	300.0	37579
890-3261-3 MSD	PH01	Soluble	Solid	300.0	37579

__

А

5

8

9

10

13

Job ID: 890-3261-1

SDG: 03E1558090

Client Sample ID: PH01

Client: Ensolum

Project/Site: JRU 108H

Lab Sample ID: 890-3261-1

Matrix: Solid

Date Collected: 10/20/22 11:50 Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	38089	10/29/22 08:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	37617	10/24/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37611	10/24/22 16:50	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		5			37788	10/25/22 21:06	CH	EET MID

Client Sample ID: PH01 Lab Sample ID: 890-3261-2 **Matrix: Solid**

Date Collected: 10/20/22 11:55 Date Received: 10/21/22 10:55

	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	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	38089	10/29/22 08:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	37617	10/24/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37611	10/24/22 17:11	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		20			37788	10/25/22 21:14	CH	EET MID

Client Sample ID: PH01 Lab Sample ID: 890-3261-3

Date Collected: 10/20/22 12:00 **Matrix: Solid** Date Received: 10/21/22 10:55

	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	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	38089	10/29/22 09:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	37617	10/24/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37611	10/24/22 17:31	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		5			37788	10/25/22 21:23	CH	EET MID

Client Sample ID: PH01 Lab Sample ID: 890-3261-4 Date Collected: 10/20/22 12:10 Matrix: Solid

Date Received: 10/21/22 10:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 07:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID

Lab Chronicle

Client: Ensolum Job ID: 890-3261-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH01 Lab Sample ID: 890-3261-4

Date Collected: 10/20/22 12:10 **Matrix: Solid** Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	38417	11/01/22 15:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38323	11/02/22 05:47	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		50			37788	10/25/22 21:48	CH	EET MID

Lab Sample ID: 890-3261-5 **Client Sample ID: PH01 Matrix: Solid**

Date Collected: 10/20/22 12:20 Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 08:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38195	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37809	10/25/22 11:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38417	11/01/22 15:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38323	11/02/22 06:08	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 21:56	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3261-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority		ogram	Identification Number	Expiration Date			
Texas	NE	ELAP	T104704400-22-24	06-30-23			
The following analyte	s are included in this rend	ort but the laboratory is r	not certified by the governing authority.	This list may include analytes for y			
the agency does not	•	ore, but the laboratory is i	iot certified by the governing authority.	This list may include analytes for v			
,	•	Matrix	Analyte	This list may include analytes for v			
the agency does not	offer certification.	•		This list may include analytes for v			

5

6

8

10

11

13

Method Description

Total BTEX Calculation

Microextraction

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

Deionized Water Leaching Procedure

Anions, Ion Chromatography

Closed System Purge and Trap

Method Summary

Client: Ensolum

Method

Total BTEX

8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

8021B

Project/Site: JRU 108H

Job ID: 890-3261-1

SDG: 03E1558090

Protocol	Laboratory
SW846	EET MID
TAL SOP	EET MID
SW846	EET MID
SW846	EET MID
MCAWW	EET MID
SW846	EET MID

EET MID **EET MID**

SW846

ASTM

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3261-1

SDG: 03E1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3261-1	PH01	Solid	10/20/22 11:50	10/21/22 10:55	2'
890-3261-2	PH01	Solid	10/20/22 11:55	10/21/22 10:55	3'
890-3261-3	PH01	Solid	10/20/22 12:00	10/21/22 10:55	4'
890-3261-4	PH01	Solid	10/20/22 12:10	10/21/22 10:55	6'
890-3261-5	PH01	Solid	10/20/22 12:20	10/21/22 10:55	7'

Project Manager: Company Name:

Ben Belill Ensolum, LLC

Bill to: (if different)

ity, State ZIP:

3122 National parks Hwy Carlsbad, NM 88220

Company Name:
Address:
City, State ZIP:

XTO Energy, Inc.
3104 E. Green Street
Carlsbad, NM 88220

2

3

5

6

8

11

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 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

1 \ (2 14) 802-0300	
o, TX (210) 509-3334	Work Order No:
TX (806) 794-1296	
NM (575) 988-3199	
	www.xenco.com Page1of1
	Work Order Comments
	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	State of Project:
	Reporting: Level II
	Deliverables: EDD

G	3	(Coldin)	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 200.8 / 6020:					PH01	PH01	PH01	PH01	PH01	Sample Identification	Total Containers:	Sample Custody Seals: Yes	Cooler Custody Seals: Yes N	Samples Received Intact: (Yes)	SAMPLE RECEIPT Temp	PO#:		Project Location: EDDY	Project Number: 03	Project Name:	
		-ark	Receiv	inquishment of samples co ity for the cost of samples a 85.00 will be applied to eac	be analyzed	6020:		10	2000	5	S 10/20/2022	Matrix Date Sampled	Corrected	No N/A Temperature Reading:	No (M/A Correction Factor:	No Thermometer ID:	Temp Blank: (Yes) No		Ben Belill	EDDY COUNTY, NM	03E1558090	JRU 108H					
		La Liter	Received by: (Signature)	nstitutes a valid purchasi ind shall not assume any h project and a charge of	TCLP / SPLP 6010:	8RCRA 13PPM					2 1220 7	2 1210 6'	2 1200 4'	2 1155 3'	2 1150 2'	Time Depth	Corrected Temperature:	re Reading:		ter ID:	Wet Ice:	the lab, if received by 4:30pm	TAT starts the day received by	Due Date:	Routine □ I	Turn Around	
		101		s order from client c responsibility for a \$6 for each sample	6010: 8RCRA	Texas 11 Al			+		Grab/ 1	oth Grab/ # of Comp Cont	Ú	5	0	7,00	No nete		eceived by		Rush Code						
		lalas po	Date/Time	company to Eurofins Xer ny losses or expenses in submitted to Eurofins X	Sb As Ba Be	Sb As Ba Be B					×	×	×	×	×	CHLOF	015)		PA:	300	.0)						
6	4	民	Relinquished by: (Signature)	nco, its affiliates and subcontractors. I ncurred by the client if such losses are tenco, but not analyzed. These terms v	Cd Cr Co Cu Pb Mn Mo	Cd Ca Cr Co Cu Fe Pb											_	890-3261 Chain of Custody								ANALYSIS REQUEST	
				tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control se terms will be enforced unless previously negotiate.	n Mo Ni Se Ag TI U	Pb Mg Mn Mo Ni K Se Ag											-	ustody								UEST	
			Received by: (Signature)	nditions ≥ control negotiated.	Hg: 1631 / 245.1 / 7470 / 7471	Se Ag SiO ₂ Na Sr TI Sn U			incidel						Cost Cente	Sample	NaOH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	Na ₂ S ₂ O ₃ : NaSO ₃	NaHSO4: NABIS	H₃PO₄: HP	H ₂ SO ₄ : H ₂	HCL: HC	Cool: Cool	None: NO	Preserv	
			Date/Time		/ 7471	V Zn		W. 1 22 130 1000	Incident Number:						Cost Center: 1139071001	Sample Comments	ic Acid: SAPC	OH: Zn	C ₃	, <u>r</u>		NaOH: Na	HNO3: HN	MeOH: Me	DI Water: H ₂ O	Preservative Codes	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3261-1

SDG Number: 03E1558090

Login Number: 3261 List Source: Eurofins Carlsbad

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Eurofins Carlsbad

Released to Imaging: 3/11/2024 11:17:01 AM

2

3

4

6

8

10

12

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-3261-1

 SDG Number: 03E1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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

Page 26 of 26 11/2/2022 (Rev. 1)



Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3262-1

Laboratory Sample Delivery Group: 03E1558090

Client Project/Site: JRU 108H

For:

🛟 eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Ben Belill

MEAMER

Authorized for release by: 10/31/2022 9:40:22 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Authorized for release by:

Ask—The Expert

Have a Question?

EOL

.....LINKS

Review your project results through

Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 3/11/2024 11:17:01 AM

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

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

2

3

4

5

6

8

11

14

Н

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-3262-1
SDG: 03E1558090

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	9
QC Sample Results	10
QC Association Summary	14
Lab Chronicle	16
Certification Summary	18
Method Summary	19
Sample Summary	20
Chain of Custody	21
Receint Checklists	22

Definitions/Glossary

Job ID: 890-3262-1 Client: Ensolum Project/Site: JRU 108H SDG: 03E1558090

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier

LCS and/or LCSD is outside acceptance limits, low biased.

LCS/LCSD RPD exceeds control limits

Qualifier Description

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

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

%R

MQL

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

Method Quantitation Limit

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit**

Presumptive **PRES** QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Job ID: 890-3262-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3262-1

Receipt

The samples were received on 10/21/2022 10:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH02 (890-3262-1), PH02 (890-3262-2), PH02 (890-3262-3) and PH02 (890-3262-4).

GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (880-20605-A-1-E MS) and (880-20605-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-38021 and analytical batch 880-38089 was outside the upper control limits.

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

GC Semi VOA

Method 8015MOD_NM: The spiking solution was inadvertently omitted during the extraction process for the laboratory control sample (LCS) associated with preparation batch 880-37769; therefore, percent recoveries are unavailable. The LCSD and MS/MSD will show acceptability for the batch, therefore data was qualified and reported.

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.

2

4

5

1

9

. .

12

13

| | 4

Matrix: Solid

Lab Sample ID: 890-3262-1

Client Sample Results

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH02

Date Collected: 10/20/22 13:50 Date Received: 10/21/22 10:55

Sample Depth: 2'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/26/22 14:13	10/29/22 04:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			10/26/22 14:13	10/29/22 04:19	1
1,4-Difluorobenzene (Surr)	97		70 - 130			10/26/22 14:13	10/29/22 04:19	1
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/30/22 21:36	1
Method: SW846 8015 NM - Diese	ol Bango Organ	ice (DBO) (30)					
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	63.5		49.9	mg/Kg	— <u> </u>		10/26/22 11:59	1
	00.0			99				
								•
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(GC)					
		nics (DRO) Qualifier	(GC)	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	Result		• •	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared 10/25/22 08:30	Analyzed 10/25/22 13:41	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U *- *1	RL		<u>D</u>			1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9	Qualifier U *- *1 *- *1	RL 49.9	mg/Kg	<u>D</u>	10/25/22 08:30	10/25/22 13:41	1
Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result<49.963.5	Qualifier U *- *1 *- *1	RL 49.9	mg/Kg	<u>D</u>	10/25/22 08:30 10/25/22 08:30	10/25/22 13:41	1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.9 63.5 <49.9	Qualifier U *- *1 *- *1	RL 49.9 49.9 49.9	mg/Kg	<u> </u>	10/25/22 08:30 10/25/22 08:30 10/25/22 08:30	10/25/22 13:41 10/25/22 13:41 10/25/22 13:41	1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9 63.5 <49.9 %Recovery	Qualifier U *- *1 *- *1	RL 49.9 49.9 49.9 <i>Limits</i>	mg/Kg	<u>D</u>	10/25/22 08:30 10/25/22 08:30 10/25/22 08:30 Prepared	10/25/22 13:41 10/25/22 13:41 10/25/22 13:41 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.9 63.5 <49.9	Qualifier U*-*1 *-*1 U Qualifier	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	10/25/22 08:30 10/25/22 08:30 10/25/22 08:30 Prepared 10/25/22 08:30	10/25/22 13:41 10/25/22 13:41 10/25/22 13:41 Analyzed 10/25/22 13:41	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <49.9 63.5 <49.9	Qualifier U*-*1 *-*1 U Qualifier	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	10/25/22 08:30 10/25/22 08:30 10/25/22 08:30 Prepared 10/25/22 08:30	10/25/22 13:41 10/25/22 13:41 10/25/22 13:41 Analyzed 10/25/22 13:41	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Client Sample ID: PH02

Date Collected: 10/20/22 14:00 Date Received: 10/21/22 10:55

Sample Depth: 4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		10/26/22 14:13	10/29/22 04:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130			10/26/22 14:13	10/29/22 04:40	

Eurofins Carlsbad

Lab Sample ID: 890-3262-2

Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Client Sample ID: PH02

Lab Sample ID: 890-3262-2 Date Collected: 10/20/22 14:00 Matrix: Solid Date Received: 10/21/22 10:55

Sample Depth: 4'

Method: SW846 8021B	- Volatile Organic	Compounds (GC)	(Continued)
moundar official course	Tolumo Organio	oompounae (,	(Continuou,

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102	70 - 130	10/26/22 14:13	10/29/22 04:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	0.00401	ma/Ka			10/30/22 21:36	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte		alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 U	49.9	ma/Ka			10/26/22 11:59	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:02	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:02	1
Surrogato	%Pacayary	Qualifier	l imite			Prepared	Analyzed	Dil Eac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	10/25/22 08:30	10/25/22 14:02	1
o-Terphenyl	93		70 - 130	10/25/22 08:30	10/25/22 14:02	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22100		249	mg/Kg			10/25/22 22:30	50

Client Sample ID: PH02 Lab Sample ID: 890-3262-3 **Matrix: Solid**

Date Collected: 10/20/22 14:05 Date Received: 10/21/22 10:55

Sample Depth: 5'

Method: SW846 8021B -	M-1-4!1- O	0 (00)

Welliou. 344040 002 ID - Volatile	Organic Comp	ounus (GC))					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1
Toluene	< 0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 06:05	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/26/22 14:13	10/29/22 06:05	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/26/22 14:13	10/29/22 06:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			10/26/22 14:13	10/29/22 06:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Anaiyzea	DII Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	10/26/22 14:13	10/29/22 06:05	1
1,4-Difluorobenzene (Surr)	96		70 - 130	10/26/22 14:13	10/29/22 06:05	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398	U	0.00398	ma/Ka			10/30/22 21:36	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/26/22 11:59	1

Matrix: Solid

Lab Sample ID: 890-3262-3

Lab Sample ID: 890-3262-4

Matrix: Solid

Job ID: 890-3262-1 SDG: 03E1558090

Client Sample ID: PH02

Date Collected: 10/20/22 14:05 Date Received: 10/21/22 10:55

Sample Depth: 5'

Client: Ensolum

Project/Site: JRU 108H

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:23	1
Diesel Range Organics (Over	<49.9	U *- *1	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:23	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/25/22 08:30	10/25/22 14:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130			10/25/22 08:30	10/25/22 14:23	1
o-Terphenyl	98		70 - 130			10/25/22 08:30	10/25/22 14:23	1

Client Sample ID: PH02
Date Collected: 10/20/22 14:15

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Date Received: 10/21/22 10:55

Sample Depth: 7'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Toluene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		10/26/22 14:13	10/29/22 06:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			10/26/22 14:13	10/29/22 06:26	1
1,4-Difluorobenzene (Surr)	92		70 - 130			10/26/22 14:13	10/29/22 06:26	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			10/30/22 21:36	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/26/22 11:59	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *- *1	50.0	mg/Kg		10/25/22 08:30	10/25/22 14:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U *- *1	50.0	mg/Kg		10/25/22 08:30	10/25/22 14:44	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/25/22 08:30	10/25/22 14:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			10/25/22 08:30	10/25/22 14:44	1
o-Terphenyl	91		70 - 130			10/25/22 08:30	10/25/22 14:44	1

Eurofins Carlsbad

3

6

7

9

11

13

Client Sample Results

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: PH02 Lab Sample ID: 890-3262-4

Date Collected: 10/20/22 14:15

Date Received: 10/21/22 10:55

Matrix: Solid

Sample Depth: 7'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	5550		50.2	mg/Kg			10/25/22 22:46	10

_

6

9

11

13

Surrogate Summary

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance
		BFB1	DFBZ1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
-20605-A-1-E MS	Matrix Spike	101	92	
20605-A-1-F MSD	Matrix Spike Duplicate	102	90	
262-1	PH02	120	97	
3262-2	PH02	130	102	
3262-3	PH02	115	96	
262-4	PH02	123	92	
380-37911/1-A	Lab Control Sample	99	91	
O 880-37911/2-A	Lab Control Sample Dup	101	91	
880-37911/5-A	Method Blank	102	87	
880-38021/5-A	Method Blank	72	60 S1-	

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3262-1	PH02	89	94	
890-3262-2	PH02	88	93	
890-3262-3	PH02	91	98	
890-3262-4	PH02	87	91	
890-3263-A-1-C MS	Matrix Spike	89	80	
890-3263-A-1-D MSD	Matrix Spike Duplicate	86	78	
LCS 880-37769/2-A	Lab Control Sample	117	125	
LCSD 880-37769/3-A	Lab Control Sample Dup	98	103	
MB 880-37769/1-A	Method Blank	100	107	
Surrogate Legend				

OTPH = o-Terphenyl

Released to Imaging: 3/11/2024 11:17:01 AM

QC Sample Results

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-37911/5-A

Matrix: Solid Analysis Batch: 38089 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 37911

	мв	мв						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/26/22 14:13	10/29/22 01:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/26/22 14:13	10/29/22 01:12	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Pre	pared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	10/26/	/22 14:13	10/29/22 01:12	1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/26/	/22 14:13	10/29/22 01:12	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 37911

Lab Sample ID: LCS 880-37911/1-A **Matrix: Solid**

Lab Sample ID: LCSD 880-37911/2-A

Analysis Batch: 38089

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07484	-	mg/Kg		75	70 - 130	
Toluene	0.100	0.07671		mg/Kg		77	70 - 130	
Ethylbenzene	0.100	0.07425		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.08609		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifie	er Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	91	70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 37911

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Limit Benzene 0.100 0.07938 mg/Kg 79 70 - 130 6 35 Toluene 0.100 0.08189 mg/Kg 82 70 - 130 35 Ethylbenzene 0.100 0.08032 mg/Kg 80 70 - 130 8 35 0.200 m-Xylene & p-Xylene 0.1556 mg/Kg 78 70 - 130 35 0.100 0.08950 o-Xylene mg/Kg 70 - 130 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Matrix: Solid

Analysis Batch: 38089

Analysis Batch: 38089

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

Prep Batch: 37911

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.08080		mg/Kg		80	70 - 130	
Toluene	<0.00201	U F1	0.100	0.07923		mg/Kg		78	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 880-20605-A-1-E MS

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 37911

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits <0.00201 UF1 Ethylbenzene 0.100 0.07637 76 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00402 UF1 0.200 0.1440 mg/Kg 72 70 - 130 0.100 0.08398 o-Xylene <0.00201 U mg/Kg 84 70 - 130

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 37911

Lab Sample ID: 880-20605-A-1-F MSD **Matrix: Solid**

Analysis Batch: 38089

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0990	0.06610	F1	mg/Kg		66	70 - 130	20	35
Toluene	<0.00201	U F1	0.0990	0.06481	F1	mg/Kg		65	70 - 130	20	35
Ethylbenzene	<0.00201	U F1	0.0990	0.06337	F1	mg/Kg		64	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1224	F1	mg/Kg		62	70 - 130	16	35
o-Xylene	<0.00201	U	0.0990	0.07052		mg/Kg		71	70 - 130	17	35

MSD MSD

Surrogate	%Recovery Qua	lifier Limits
4-Bromofluorobenzene (Surr)	102	70 - 130
1,4-Difluorobenzene (Surr)	90	70 - 130

Lab Sample ID: MB 880-38021/5-A

Matrix: Solid

Analysis Batch: 38089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 38021

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/27/22 13:34	10/28/22 13:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/27/22 13:34	10/28/22 13:48	1

MB MB

мв мв Result Qualifier

<50.0 U

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	10/27/22 13:34	10/28/22 13:48	1
1,4-Difluorobenzene (Surr)	60	S1-	70 - 130	10/27/22 13:34	10/28/22 13:48	1

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

Lab Sample ID: MB 880-37769/1-A

Matrix: Solid

Analysis Batch: 37764

Gasoline Range Organics

Client Sample ID: Method Blank

Prepared

10/25/22 08:30

Prep Type: Total/NA Prep Batch: 37769

10/25/22 09:08

(GRO)-C6-C10

Eurofins Carlsbad

RL

50.0

Unit

mg/Kg

QC Sample Results

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Lab Sample ID: MB 880-37769/1-A

Matrix: Solid

Analysis Batch: 37764

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37769

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/25/22 08:30	10/25/22 09:08	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/25/22 08:30	10/25/22 09:08	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			10/25/22 08:30	10/25/22 09:08	1
o-Terphenvl	107		70 - 130			10/25/22 08:30	10/25/22 09:08	1

Lab Sample ID: LCS 880-37769/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA Prep Batch: 37769 Analysis Batch: 37764 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits 16.63 J*-Gasoline Range Organics 1000 2 70 - 130 mg/Kg (GRO)-C6-C10 1000 16.30 J*-Diesel Range Organics (Over mg/Kg 70 - 130 C10-C28) LCS LCS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 117 o-Terphenyl 125 70 - 130

Lab Sample ID: LCSD 880-37769/3-A

Matrix: Solid

Analysis Batch: 37764

Spike

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 37769
Rec RPD

							,			
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	802.8	*1	mg/Kg		80	70 - 130	192	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	841.9	*1	mg/Kg		84	70 - 130	192	20	
C10-C28)										

	LUSD	LUSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	103		70 - 130

ICED ICED

Lab Sample ID: 890-3263-A-1-C MS

Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 37764 Prep Batch: 37769

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.8	U *1 *-	998	1230		mg/Kg		121	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.8	U *1 *-	998	903.5		mg/Kg		91	70 - 130	
C10 C28)										

C10-C28)			
	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	80		70 - 130

Eurofins Carlsbad

2

A

5

7

9

11

13

М

iiio Gariobaa

Client: Ensolum Job ID: 890-3262-1 Project/Site: JRU 108H SDG: 03E1558090

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

Lab Sample ID: 890-3263-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 37764** Prep Batch: 37769

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8	U *1 *-	998	1205		mg/Kg		119	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.8	U *1 *-	998	871.4		mg/Kg		87	70 - 130	4	20
C10-C28)											

MSD MSD %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 86 o-Terphenyl 78 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-37579/1-A Client Sample ID: Method Blank

Matrix: Solid Prep Type: Soluble

Analysis Batch: 37788

мв мв

Analyte Result Qualifier Unit RL Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 10/25/22 19:00

Lab Sample ID: LCS 880-37579/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	242.4		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-37579/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 37788

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	243.5		mg/Kg		97	90 - 110	0	20	

Lab Sample ID: 890-3261-A-3-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	3160		1260	4301		mg/Kg		91	90 - 110	

Lab Sample ID: 890-3261-A-3-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 37788

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	3160		1260	4415		mg/Kg		100	90 - 110	3	20

Eurofins Carlsbad

Prep Type: Soluble

QC Association Summary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC VOA

Prep Batch: 37911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	5035	
890-3262-2	PH02	Total/NA	Solid	5035	
890-3262-3	PH02	Total/NA	Solid	5035	
890-3262-4	PH02	Total/NA	Solid	5035	
MB 880-37911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 38021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-38021/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 38089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	8021B	37911
890-3262-2	PH02	Total/NA	Solid	8021B	37911
890-3262-3	PH02	Total/NA	Solid	8021B	37911
890-3262-4	PH02	Total/NA	Solid	8021B	37911
MB 880-37911/5-A	Method Blank	Total/NA	Solid	8021B	37911
MB 880-38021/5-A	Method Blank	Total/NA	Solid	8021B	38021
LCS 880-37911/1-A	Lab Control Sample	Total/NA	Solid	8021B	37911
LCSD 880-37911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37911
880-20605-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	37911
880-20605-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	37911

Analysis Batch: 38192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	Total BTEX	
890-3262-2	PH02	Total/NA	Solid	Total BTEX	
890-3262-3	PH02	Total/NA	Solid	Total BTEX	
890-3262-4	PH02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 37764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	8015B NM	37769
890-3262-2	PH02	Total/NA	Solid	8015B NM	37769
890-3262-3	PH02	Total/NA	Solid	8015B NM	37769
890-3262-4	PH02	Total/NA	Solid	8015B NM	37769
MB 880-37769/1-A	Method Blank	Total/NA	Solid	8015B NM	37769
LCS 880-37769/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	37769
LCSD 880-37769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	37769
890-3263-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	37769
890-3263-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	37769

Prep Batch: 37769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

2

2

_

5

8

44

12

. .

М

QC Association Summary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

GC Semi VOA (Continued)

Prep Batch: 37769 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-2	PH02	Total/NA	Solid	8015NM Prep	
890-3262-3	PH02	Total/NA	Solid	8015NM Prep	
890-3262-4	PH02	Total/NA	Solid	8015NM Prep	
MB 880-37769/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-37769/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-37769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3263-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3263-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 37884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Total/NA	Solid	8015 NM	
890-3262-2	PH02	Total/NA	Solid	8015 NM	
890-3262-3	PH02	Total/NA	Solid	8015 NM	
890-3262-4	PH02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 37579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Soluble	Solid	DI Leach	
890-3262-2	PH02	Soluble	Solid	DI Leach	
890-3262-3	PH02	Soluble	Solid	DI Leach	
890-3262-4	PH02	Soluble	Solid	DI Leach	
MB 880-37579/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3261-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3261-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 37788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3262-1	PH02	Soluble	Solid	300.0	37579
890-3262-2	PH02	Soluble	Solid	300.0	37579
890-3262-3	PH02	Soluble	Solid	300.0	37579
890-3262-4	PH02	Soluble	Solid	300.0	37579
MB 880-37579/1-A	Method Blank	Soluble	Solid	300.0	37579
LCS 880-37579/2-A	Lab Control Sample	Soluble	Solid	300.0	37579
LCSD 880-37579/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	37579
890-3261-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	37579
890-3261-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	37579

Eurofins Carlsbad

1

3

Л

8

9

10

12

13

Client Sample ID: PH02

Client: Ensolum

Project/Site: JRU 108H

Date Collected: 10/20/22 13:50 Date Received: 10/21/22 10:55 Lab Sample ID: 890-3262-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 04:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 13:41	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		20			37788	10/25/22 22:21	CH	EET MID

Lab Sample ID: 890-3262-2 **Client Sample ID: PH02**

Date Collected: 10/20/22 14:00

Date Received: 10/21/22 10:55

Lab	Odilipic	ID.	030-0202-2
			Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 04:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 14:02	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		50			37788	10/25/22 22:30	CH	EET MID

Client Sample ID: PH02 Lab Sample ID: 890-3262-3 Date Collected: 10/20/22 14:05 **Matrix: Solid**

Date Received: 10/21/22 10:55

	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	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 06:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 14:23	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 22:38	CH	EET MID

Client Sample ID: PH02 Lab Sample ID: 890-3262-4

Date Collected: 10/20/22 14:15 Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	37911	10/26/22 14:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38089	10/29/22 06:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38192	10/30/22 21:36	SM	EET MID

Eurofins Carlsbad

Matrix: Solid

Lab Chronicle

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Client Sample ID: PH02

Lab Sample ID: 890-3262-4

Matrix: Solid

Date Collected: 10/20/22 14:15 Date Received: 10/21/22 10:55

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			37884	10/26/22 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	37769	10/25/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	37764	10/25/22 14:44	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	37579	10/22/22 12:59	SMC	EET MID
Soluble	Analysis	300.0		10			37788	10/25/22 22:46	CH	EET MID

Laboratory References:

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

9

10

11

13

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	it the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for w
the agency does not of	fer certification.	,	ou s, and governmig dualismy.	ay molado analytoo for v
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte	ay morado anarytoo tor v
9 ,		•	, , ,	

4

6

10

11

13

Method Summary

 Client: Ensolum
 Job ID: 890-3262-1

 Project/Site: JRU 108H
 SDG: 03E1558090

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

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

6

8

11

13

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-3262-1

SDG: 03E1558090

epth			

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3262-1	PH02	Solid	10/20/22 13:50	10/21/22 10:55	2'
890-3262-2	PH02	Solid	10/20/22 14:00	10/21/22 10:55	4'
890-3262-3	PH02	Solid	10/20/22 14:05	10/21/22 10:55	5'
890-3262-4	PH02	Solid	10/20/22 14:15	10/21/22 10:55	7'

Carlsbad, NM 88220 3122 National parks Hwy

Carlsbad, NM 88220 3104 E. Green Street XTO Energy, Inc. Garrett Green

State of Project:

Program: UST/PST 🗌 PRP 🗎 Brownfields 📗 RRC 📗 Superfund 📗

Level IV

Company Name: Bill to: (if different)

Company Name: Address:

> Ensolum, LLC Ben Belill

oject Manager:

Chain of Custody

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

om Page	Work Ord	www.xenco.com	
	Work Order Comments		

Work Order No:

Revised Date: 08/25/2020 Rev. 2020.2	70				6			_						5
					4					,				3 (
				5	DE	celie	000	4	3	a la	No.	ý		(M88-20
Date/Time	Received by: (Signature)	Received by	Relinquished by: (Signature)	Relinquished		Date/Time	Da		ure)	Received by: (Signature)	Received		ignature)	Relinquished by: (Signature)
	nditions e control negotiated.	rs. It assigns standard terms and conditions s are due to circumstances beyond the control ms will be enforced unless previously negotiat	ubcontractors, it assigns s f such losses are due to cir d. These terms will be enfo	o, its affiliates and surred by the client if it is a filiates and surred by the client if it is a filiates.	fins Xenco enses incu irofins Xen	ny to Euro ses or exp itted to Eu	nt compai or any los: iple subm	r from clies Insibility for I each sam	rchase orde 1e any respo 1rge of \$5 fo	tutes a valid pu shall not assum roject and a cha	f samples consti of samples and pplied to each pi	uishment of or the cost 00 will be a	ment and relinqu Il be liable only fon charge of \$85.0	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85,00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.
/4/0 / /4/	Hg: 1631/245.1//4/0//4/1	ig II U	Pb Mn Mo Ni Se Ag	Cr Co Cu F	Be Cd	Sb As Ba Be	RA Sb	9. SRCF	PLP 6010	TCLP / SPLP 6010: 8RCRA	ed	analyz	/letal(s) to be	Circle Method(s) and Metal(s) to be analyzed
Sn U V Zn	Ag SiO ₂ Na Sr Ti Sn U	lo Ni K Se A	Mg	Ca Cr Cc		As Ba		Texas 11 A	oM Tex	8RCRA 13PPM	87	020:	200.8 / 6020:	Total 200.7 / 6010
							\parallel	\parallel						
Incident Number: NAPP2217931599	Z =					+	+							
						+	+	1						
						\dagger	+	-						
					×	×	×	Grab/	7.	1415	10/20/2022	S		PH02
					×	×	×	Grab/	Qī	1405	10/20/2022	S		PH02
					×	×	×	Grab/	4	1400	10/20/2022	ഗ		PH02
Cost Center: 1139071001	Cost				×	×	×	Grab/	2	1350	10/20/2022	S		PH02
Sample Comments	Sa				втех	TPH (8	C # of	Grab/ #	Depth	Time Sampled	Date Sampled	Matrix	ation	Sample Identification
NaCH+Ascorbic Acid SAPC	NaCH+		- 1		802	015)	RIDE	D	-	perature:	Corrected Temperature:			Total Containers:
Zn Acetate+NaOH: Zn	Zn Aceta		890-3262 Chain of Custody	890-326	1		S (E		-,	Reading:	N/A Temperature Reading:	NA P	Yes No	Sample Custody Seals:
3. NaoC3	Na ₂ O ₂ O ₃ Na ₃ O ₃							0	þ	tor:	Correction Factor:	AND C	Yes No	Cooler Custody Seals:
NABIO	NaHSU NABIS							3	7	Ď	Thermometer ID:	No I	E	Samples Received Intact:
HP	H ₃ PO ₄ : HP						nete 	S O	Seg.	Wet ice:	No No	ank:	Temp Blank:	SAMPLE RECEIPT
1 ₂ NaCH: Na	H ₂ SO ₄ : H ₂						ers	-	eived by 4:3	the lab, if received by 4:30pm				PO#:
	HCLHC							ed by	day receiv	TAT starts the day received by		Ben Belill	Ber	Sampler's Name:
<u>u</u>	Cool: Cool							L		Due Date:		OUNTY,	EDDY COUNTY, NM	Project Location:
	None: NO						Code	0.3	Rush	Routine		03E1558090	03E1	Project Number:
Preservative Codes	Pre		ANALYSIS REQUEST	ANA					Turn Around	Turn		JRU 108H	JRL	Project Name:
Cardi		Deliverables: EDD []	Deliver				com	nsolum.	bbelilige	Email:			9898540852	Phone: 989
	Reporting: Level II	ng. Level II Level	Report		Carlsbad, NM 88220	sbad, N	Car	ZIP:	City, State ZIP:			8220	Carlsbad, NM 88220	City, State ZIP: Car
TRRP I aval IV	IIII TORT/IICT T	lavel	0				-						- 1 1 Marie	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3262-1 SDG Number: 03E1558090

Login Number: 3262 List Source: Eurofins Carlsbad

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3262-1 SDG Number: 03E1558090

Login Number: 3262 **List Source: Eurofins Midland** List Number: 2

List Creation: 10/24/22 07:56 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").



APPENDIX E

NMOCD Notifications

From: Hamlet, Robert, EMNRD

To: Collins, Melanie

Cc: DelawareSpills /SM; Green, Garrett J; Ben Belill; Ashley Ager; Tacoma Morrissey; Kalei Jennings; Bratcher,

Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD

Subject: (Extension Approval) - James Ranch Unit 108H - Incident Number NAPP221793159

Date: Monday, September 19, 2022 3:21:36 PM

Attachments: <u>image003.png</u>

[**EXTERNAL EMAIL**]

RE: Incident #NAPP2217931599

Melanie,

Your request for an extension to **December 19th, 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
506 W. Texas Ave.| 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: Monday, September 19, 2022 12:04 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; mike.bratcher@state.nm.us; Hamlet,

Robert, EMNRD < Robert. Hamlet@state.nm.us>

Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Green, Garrett J

<garrett.green@exxonmobil.com>; bbelill@ensolum.com; Ashley Ager <aager@ensolum.com>;

Tacoma Morrissey <tmorrissey@ensolum.com>; Kalei Jennings <kjennings@ensolum.com>

Subject: [EXTERNAL] XTO - Extension Request - James Ranch Unit 108H - Incident Number

NAPP2217931599

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

Αll,

XTO – Extension Request – James Ranch Unit 108H – Incident Number nAPP2217931599

XTO is requesting an extension for the current deadline of September 20, 2022 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the James Ranch

Unit 108H (Incident Number NAPP2217931599). The release occurred on June 22, 2022, and initial site assessment activities were completed July 26, 2022. Additional delineation activities were completed last week and are pending laboratory analytical results. In order to review the laboratory analytical results, discuss remedial options, and submit a remediation work plan or closure report, XTO requests an extension until December 19, 2022.

Thank you,

Melanie Collins

ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

Ben Belill

From: Tacoma Morrissey

Sent: Wednesday, December 14, 2022 1:49 PM

To: Ben Belill

Subject: FW: XTO - Sampling Notification (Week of 10/17/22 - 10/21/22)

See below!



From: Green, Garrett J <garrett.green@exxonmobil.com>

Sent: Monday, October 17, 2022 11:21 AM

To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>

Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>

Subject: XTO - Sampling Notification (Week of 10/17/22 - 10/21/22)

[**EXTERNAL EMAIL**]

All,

Please see the update below to this week's sampling schedule. XTO plans to complete final sampling activities at the following sites the week of Oct 17, 2022.

Monday

BEU 29W Vader 100H / nAPP2102831345

Tuesday

- BEU 29W Vader 100H / nAPP2102831345
- PLU 21 BD 125H/ nAPP2214547737

Wednesday

- BEU 29W Vader 100H / nAPP2102831345
- PLU 30 Big Sinks/ nAPP2209137379, nAPP2208351954, nAPP2206853301

Thursday

- PLU 30 Big Sinks/ nAPP2209137379, nAPP2208351954, nAPP2206853301
- JRU 108 / nAPP2217931599
- JRU 106 / nAPP2212344322

Garrett Green

Environmental Coordinator Delaware Business Unit

(575) 200-0729 Garrett.Green@ExxonMobil.com

XTO Energy, Inc. 3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729



October 24, 2023

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

Re: Closure Request

James Ranch Unit 108H

Incident Number nAPP2217931599

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 remedial actions completed to address impacted soil identified at the James Ranch Unit 108H (Site) following the New Mexico Oil Conservation Division (NMOCD) approval of the April 28, 2023 *Remediation Work Plan*. The purpose of the remedial actions was to address impacted soil resulting from a release of produced water and crude oil 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 activities that has occurred and requesting no further action for Incident Number nAPP2217931599.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 1, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.33641, -103.83180) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 22, 2022, corrosion on a flowline resulted in the release of 7.26 barrels (bbls) of produced water and 1.59 bbls of crude oil into the pasture underneath active surface flowlines. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 0.41 bbls of produced water and 0.09 bbls of crude oil were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on June 27, 2022. The release was assigned Incident Number nAPP2217931599.

Between July 26, and October 20, 2022, Ensolum personnel conducted Site assessment and delineation activities to evaluate the release extent based on information provided on the Form C-141 and visual observations. Results of the assessments were presented in the December 19, 2022, *Remediation Work Plan (Work Plan)* which proposed excavation of soil containing total petroleum hydrocarbon (TPH) exceeding 100 milligrams per kilogram (mg/kg) and the collection of background potholes to determine the presence or absence of naturally occurring chloride in native soil. The proposed remedial actions were approved by NMOCD on April 28, 2023 with the following conditions:

- This release is in a high karst area and will need to be remediated to the strictest closure criteria from Table 1 of the OCD Spill Rule.
- Please collect confirmation samples, representing no more than 200 ft². All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Sidewall samples should be

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 3122 National Parks Highway | Carlsbad, NM 88220 | ensolum.com

XTO Energy, Inc. Closure Request James Ranch Unit 108H

delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release.

- All background samples should be collected in 1-foot increments down to the depth equivalent
 to the deepest depth of the excavation. The five background numbers at a depth of 1 foot should
 be averaged. The five background numbers at a depth of 2 feet should be averaged and so on.
 The composite numbers will be used for the final background numbers.
- The work will need to occur in 90 days after the work plan has been reviewed.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Based on the results of the Site Characterization and the conditions of approval, the following NMOCD Table I Closure Criteria (Closure Criteria) were applied:

Benzene: 10 mg/kg

Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

TPH: 100 mg/kgChloride: 600 mg/kg

BACKGROUND CHLORIDE INVESTIGATION

Chloride concentrations in soil exceeding 600 mg/kg were collected from BG01 on October 20, 2022, and presented in the approved Work Plan. The extended distance between BG01 and the release suggested the possibility of naturally occurring chloride in native soils, and Ensolum proposed investigation of background conditions in four additional locations (BG02 through BG05). On September 11, 2023, three potholes were advanced via backhoe in approved off-pad areas undisturbed by oil and gas production operations. The original BG01 location was extended vertically, and BG02 and BG05 were advanced as proposed. One sample was collected from BG01 at 7 feet bgs. Soil samples were collected every 2 feet from BG02 and BG05 and field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and for chloride utilizing Hach® chloride QuanTab® test strips. The terminal soil sample in BG01 and two soil samples each from BG02 and BG05 were submitted for laboratory analysis. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Observations and field screening results were logged on lithologic/soil sampling logs, which are included in Appendix A. The background pothole locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted with previously collected delineation samples on Figure 2. Photographic documentation is presented in a photographic log in Appendix B.

Following an on-site review of the field screening results from samples collected from potholes BG01, BG02, and BG05, it was determined that naturally occuring chlorides were not present. As such, proposed background potholes BG03 and BG04 were not advanced. Soil containing elevated chloride in the vicinity of BG01 was likely an isolated occurance, unrelated to the release or naturally occuring conditions. XTO proceeded with delineation and excavation of impacted soil using 600 mg/kg as the



XTO Energy, Inc. Closure Request James Ranch Unit 108H

site-specific Closure Criteria for chloride. Laboratory analytical results from background soil samples confirmed this conclusion.

DELINEATION ACTIVITIES

On September 12, 2023, Ensolum personnel advanced four delineation potholes (PH03 through PH06) in the four cardinal directions immediately surrounding the location of pothole BG01, to a maximum depth of 6 feet bgs. Soil samples were field screened for VOCs and chloride and documented with observations on lithologic/soil sampling logs, which are included in Appendix A. Discrete delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 6 feet bgs. The delineation soil samples were handled as described above and analyzed at Eurofins.

Laboratory analytical results for the delineation soil samples collected from potholes PH03 through PH06, indicated all COCs were compliant with the Closure Criteria and laterally defined the extent of chloride-impacted soil observed in BG01. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix C.

EXCAVATION ACTIVITIES

Between September 14, 2023 and October 13, 2023, impacted soil was excavated from the release area as indicated by laboratory analytical results. In addition, though unrelated to the release, impacted soil observed in BG01 was excavated. Excavation activities were performed using a backhoe, track hoe and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride. The release excavation was completed to depths ranging from 1 foot to 8 feet bgs. The excavation in the vicinity of BG01 was completed to a depth of 6 feet bgs.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the floor and sidewalls of the excavation extents. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation soil samples were collected, handled, and analyzed as described above. The excavation extents and excavation soil sample locations are presented on Figure 3.

Floor samples FS01 through FS10 were collected from the floor of the release excavation at depths of 1-foot to 8 feet bgs. Sidewall samples SW01 through SW08 were collected from the sidewalls of the release excavation at depths ranging from ground surface to 8 feet bgs. The excavation area measured approximately 1,970 square feet. Approximately 500 cubic yards of impacted soil were removed during the excavation activities.

Floor sample FS11 and sidewall samples SW09 and SW10 were collected from the floor and sidewalls of the excavation completed to address chloride impacted soil observed in BG01. The excavation area measured approximately 50 square feet. Confirmation sidewall soil sample SW09 collected from ground surface to 6 feet bgs indicated TPH concentrations exceeded the Site Closure Critera. On October 17, 2023, Ensolum returned to the Site to remove additional soil and recollect a confirmation soil sample in near SW09. One 5-point composite soil sample (SW09A) was collected following scrapping of additional soil at depths ranging from ground surface to 6 feet bgs. The soil sample was collected, field screened, handled, and analyzed as described above.

Laboratory analytical results for all final confirmation soil samples indicated all COC concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix C.



XTO Energy, Inc. Closure Request James Ranch Unit 108H

A total of approximately 515 cubic yards of impacted soil was removed during all excavation activities. The impacted soil was transported and disposed of at R360 Landfill Facility in Hobbs, New Mexico.

CLOSURE REQUEST

XTO performed a limited background investigation but did not identify naturally occurring elevated chloride concentrations. As such, XTO proceeded with removal of impacted soil to the strictest Table I Closure Criteria. Laboratory analytical results for all final confirmation soil samples collected from the final excavation extents indicated all COC concentrations were compliant with the Site Closure Criteria. XTO backfilled the southern excavation area on October 13, 2023, with material purchased locally and recontoured the Site to match pre-existing Site conditions. The smaller northern excavation will be backfilled in the same manner described above. The backfilled area and the areas affected by the release will be reseeded with an approved BLM seed mixture.

Remedial actions completed at the Site have addressed soil impacted June 2022 release of produced water and crude oil. As such, XTO is respectfully requesting no further action for Incident Number nAPP2217931599.

If you have any questions or comments, please contact Mr. Ben Belill at (989) 854-0852 or bbelill@ensolum.com.

ashley L. ager

Principal

Ashley L. Ager, MS, PG

Sincerely, **Ensolum, LLC**

Benjamin J. Belill Project Geologist

cc: Garrett Green, XTO

Tommee Lambert, XTO

BLM

Appendices:

Figure 1 Site Receptor Map

Figure 2 Delineation Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Lithologic/soil sampling Logs

Appendix B Photographic Log

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

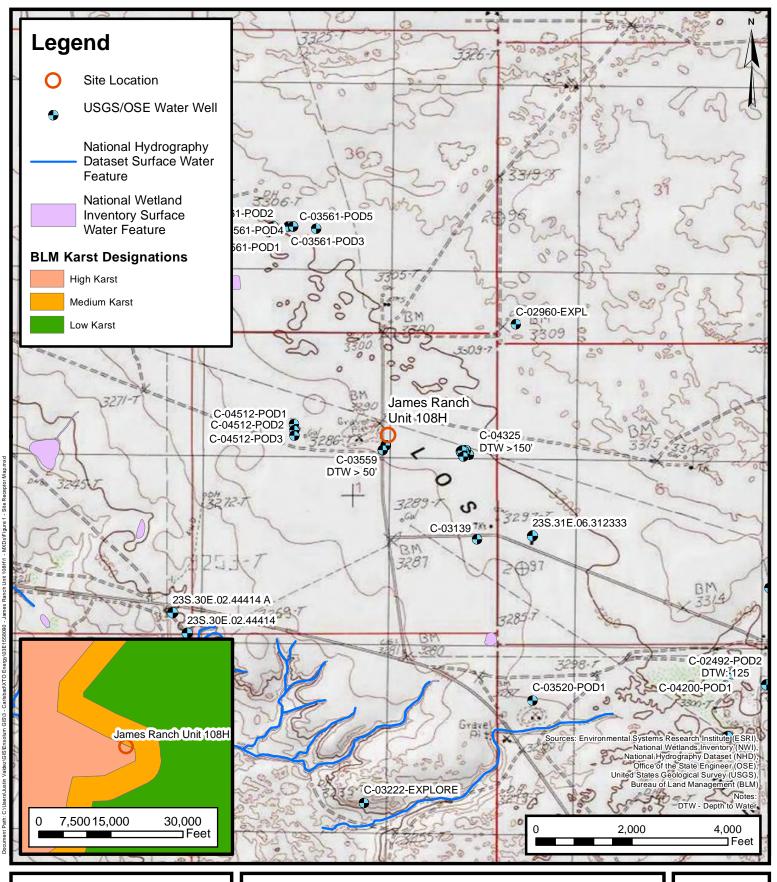
Appendix D NMOCD Notifications

Appendix E Remediation Work Plan December 19, 2022





FIGURES

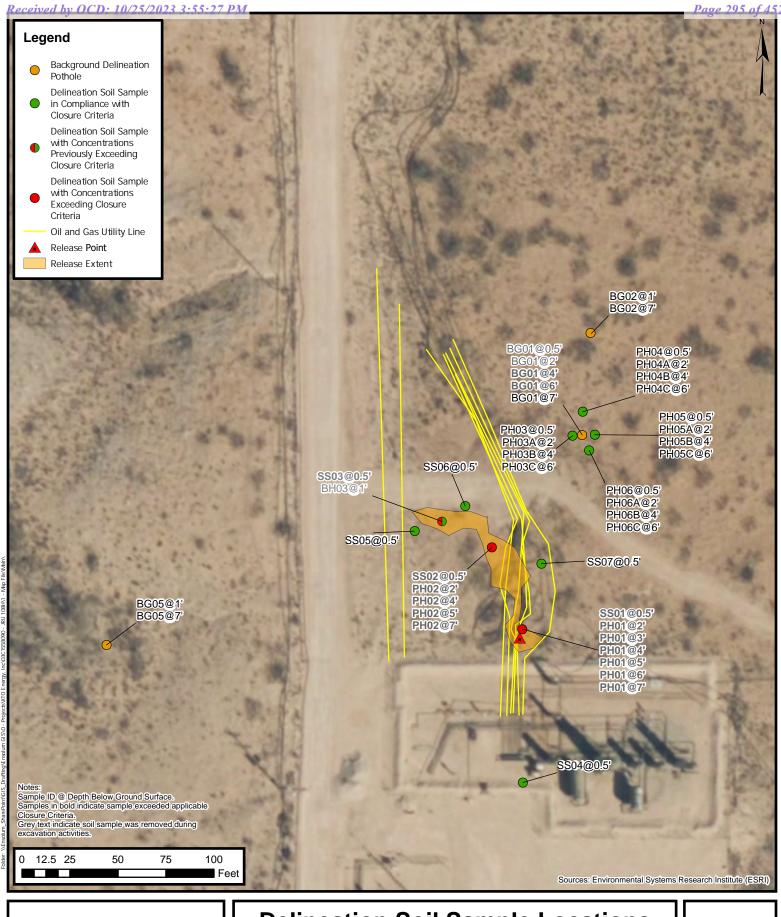




Site Receptor Map

XTO Energy Inc.
James Ranch Unit 108H
Incident Number: nAPP2217931599
Unit G, Sec 1, T 23S, R 30E
Eddy County, New Mexico

FIGURE 1



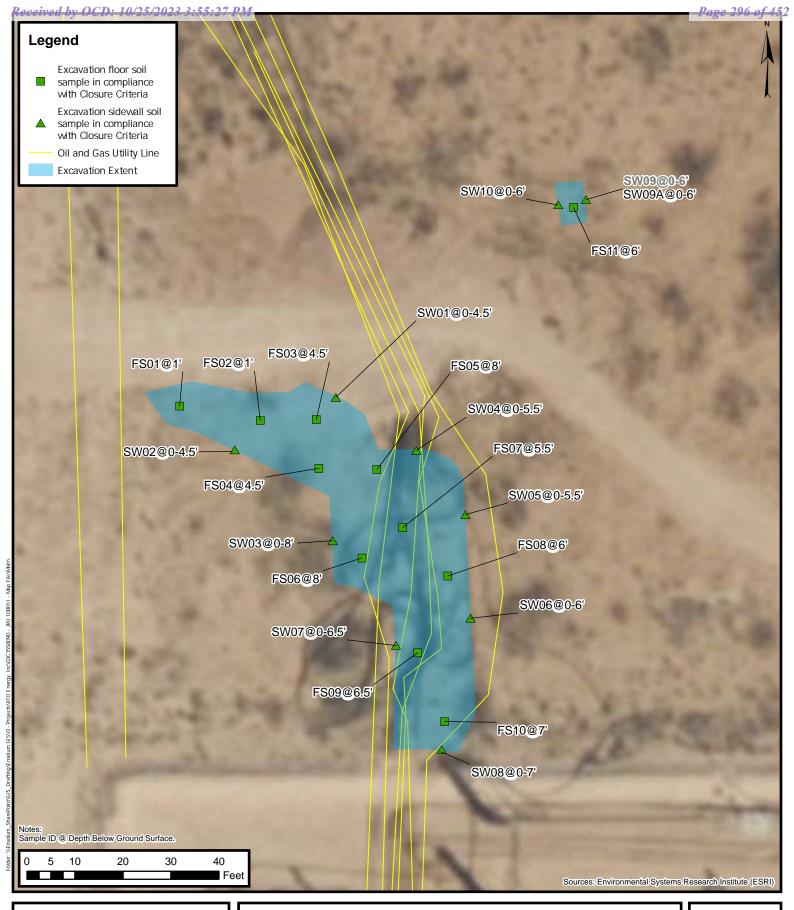


Delineation Soil Sample Locations

XTO Energy Inc.

James Ranch Unit 108H
Incident Number: nAPP2217931599
Unit G, Sec 1, T 23S, R 30E
Eddy County, New Mexico

FIGURE 2





Excavation Soil Sample LocationsXTO Energy INC.

James Ranch Unit 108H
Incident Number: nAPP2217931599
Unit G, Sec 1, T 23S, R 30E
Eddy County, New Mexico

FIGURE 3

Released to Imaging: 3/11/2024 11:17:01 AM



TABLES

TABLE 1 **SOIL SAMPLE ANALYTICAL RESULTS** James Ranch Unit 108H XTO Energy, Inc **Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table	I Closure Criteria (N	NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
				Backgrou	ınd Delineation Soil	Samples				
BG01	10/20/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	10.4
BG01	09/11/2023	2	<0.00199	<0.00398	<49.6	<49.6	<49.6	<4 9.6	<49.6	62.1
BG01	10/20/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	4 ,860
BG01	10/20/2022	6	0.00216	<0.00401	<50.0	< 50.0	<50.0	<50.0	<50.0	4,650
BG01	09/11/2023	7	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	156
BG02	09/11/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	103
BG02	09/11/2023	7	<0.00200	< 0.00399	<50.3	<50.3	<50.3	<50.3	<50.3	181
BG05	09/11/2023	1	<0.00201	<0.00402	<50.2	<50.2	<50.2	<50.2	<50.2	113
BG05	09/11/2023	7	<0.00202	<0.00404	<50.4	<50.4	<50.4	<50.4	<50.4	358
				De	lineation Soil Samp	les				
PH03	09/12/2023	0.5	<0.00202	<0.00404	<49.6	<49.6	<49.6	<49.6	<49.6	101
PH03A	09/12/2023	2	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	40.2
PH03B	09/12/2023	4	<0.00199	<0.00398	<50.2	<50.2	<50.2	<50.2	<50.2	35.4
PH03C	09/12/2023	6	<0.00198	<0.00396	<50.4	<50.4	<50.4	<50.4	<50.4	111
PH04	09/12/2023	0.5	<0.00201	<0.00402	<50.2	<50.2	<50.2	<50.2	<50.2	106
PH04A	09/12/2023	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	124
PH04B	09/12/2023	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	142
PH04C	09/12/2023	6	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	105
PH05	09/12/2023	0.5	<0.00198	<0.00396	<50.3	<50.3	<50.3	<50.3	<50.3	67.3
PH05A	09/12/2023	2	<0.00202	<0.00403	<50.1	<50.1	<50.1	<50.1	<50.1	68.4
PH05B	09/12/2023	4	<0.00199	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	48.3
PH05C	09/12/2023	6	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	55.2
PH06	09/12/2023	0.5	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	41.7
PH06A	09/12/2023	2	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	57.2
PH06B	09/12/2023	4	<0.00202	<0.00403	<49.7	<49.7	<49.7	<49.7	<49.7	100
PH06C	09/12/2023	6	<0.00202	<0.00404	<50.5	<50.5	<50.5	<50.5	<50.5	103

Received by OCD: 10/25/2023 3:55:27 PM

Received by OCD: 10/25/2023 3:55:27 PM

TABLE 1 **SOIL SAMPLE ANALYTICAL RESULTS** James Ranch Unit 108H XTO Energy, Inc **Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table	I Closure Criteria (N	NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
					Floor Soil Samples					
FS01	09/14/2023	1	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	510
FS02	09/18/2023	1	<0.00199	<0.00398	<50.1	53.8	<50.1	53.8	53.8	169
FS03	09/18/2023	4.5	<0.00201	<0.00402	<50.2	<50.2	<50.2	<50.2	<50.2	184
FS04	09/18/2023	4.5	<0.00202	< 0.00403	<50.5	59.4	<50.5	59.4	59.4	212
FS05	09/18/2023	8	<0.00199	<0.00398	<49.8	72.9	<49.8	72.9	72.9	556
FS06	09/18/2023	8	<0.00198	< 0.00396	<49.9	58.8	<49.9	58.8	58.8	216
FS07	09/18/2023	5.5	<0.00200	<0.00400	<49.6	64.4	<49.6	64.4	64.4	473
FS08	09/18/2023	6	<0.00198	< 0.00397	<50.2	<50.2	<50.2	<50.2	<50.2	186
FS09	09/18/2023	6.5	<0.00200	< 0.00399	<50.5	52.8	<50.5	52.8	52.8	245
FS10	09/18/2023	7	<0.00201	<0.00402	<50.3	<50.3	<50.3	<50.3	<50.3	328
FS11	10/13/2023	6	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	379
				5	idewall Soil Sample	es				
SW01	09/18/2023	0 - 4.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	207
SW02	09/18/2023	0 - 4.5	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	102
SW03	09/18/2023	0 - 8	<0.00200	< 0.00399	<49.5	55.0	<49.5	55	55.0	327
SW04	09/18/2023	0 - 5.5	<0.00201	<0.00402	<49.6	57.2	<49.6	57.2	57.2	199
SW05	09/18/2023	0 - 5.5	<0.00201	<0.00402	<50.5	51.4	<50.5	51.4	51.4	106
SW06	09/18/2023	0 - 6	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	45.8
SW07	09/18/2023	0 - 6.5	<0.00199	<0.00398	<50.2	60.3	<50.2	60.3	60.3	408
SW08	09/18/2023	0 - 7	<0.00200	<0.00401	<49.8	71.8	<49.8	71.8	71.8	103



TABLE 1 **SOIL SAMPLE ANALYTICAL RESULTS** James Ranch Unit 108H **XTO Energy, Inc Eddy County, New Mexico**

Sample I.D.	Sample I.D. Sample Depth (feet bgs) NMOCD Table I Closure Criteria (NMAC 19.15.29)		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			10	50	NE	NE	NE	NE	100	600
SW09	10/13/2023	0-6	<0.00199	<0.00398	<50.3	475	<50.3	475	475	127
SW09A	SW09A 10/17/2023 0 - 6		<0.00200	< 0.00399	<50.1	<50.1	<50.1	<50.1	<50.1	116
SW10	10/13/2023	0 - 6	<0.00200	< 0.00399	<50.5	<50.5	<50.5	<50.5	<50.5	119

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

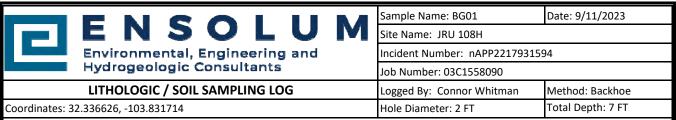
TPH: Total Petroleum Hydrocarbon

Samples in Grey indicate soil sample was removed during excavation activities.



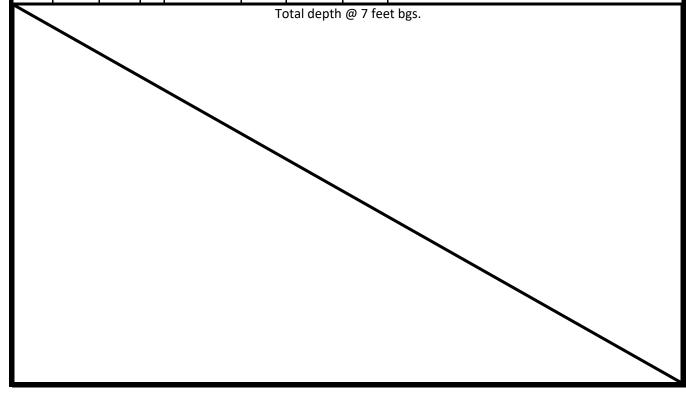
APPENDIX A

Lithologic Soil Sampling Logs



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. A 40% error factor is included in all chloride screenings.

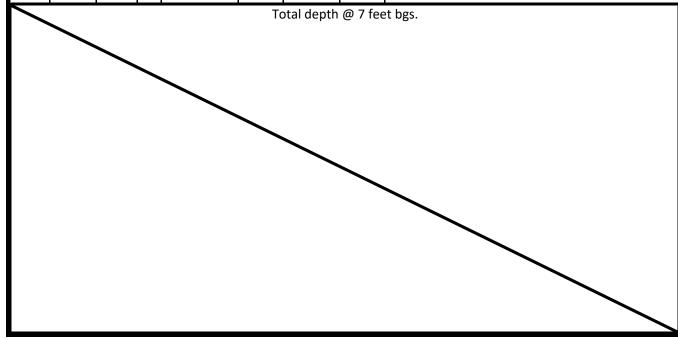
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sampl e Depth (ft	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	<168	0.0	Ν	BG01	0.5] -	SP	SAND, veryfine, brown, poorly sorted, with silt. No stain or odor.
Dry	<168	0.0	N		1	1		nie stam en each
Dry	<168	0.0	N	BG01	2	2		SAND, brown, poorly sorted, with silt and trace caliche. No Stain, no odor
Dry	<168	0	N		3 -	3	CCHE	CALICHE, white, very indurated. No stain, no odor.
Dry	<168	0.0	N	BG01	4	4		
Dry	<168	0.0	N		5	5		
Dry	<168	0.0	N	BG01	5	6		
Dry	<168	0.0	N	BG01	7	7		





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. A 40% error factor is included in all chloride screenings.

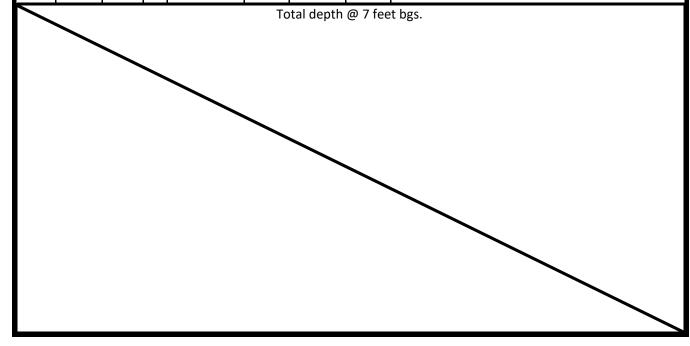
								ŭ
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry Dry	<168 <168	0.3 0.2	N N	BG02	0.5 <u> </u>	1	SP	SAND, veryfine, brown, poorly sorted, with silt. No stain or odor.
Dry	<168	0.2	N		2 _	2		SAND, brown, poorly sorted, with silt and trace caliche. No Stain, no odor
Dry	<168	0.1	N		3 -	_ _ 3 _	CCHE	CALICHE, white, very indurated. No stain, no odor.
Dry	<168	0.0	N		4 _	<u> </u>		
Dry	<168	0.0	N		5 -	5		
Dry	<168	0.0	N		6	6		
Dry	<168	0.0	N	BG02	7 _	7		

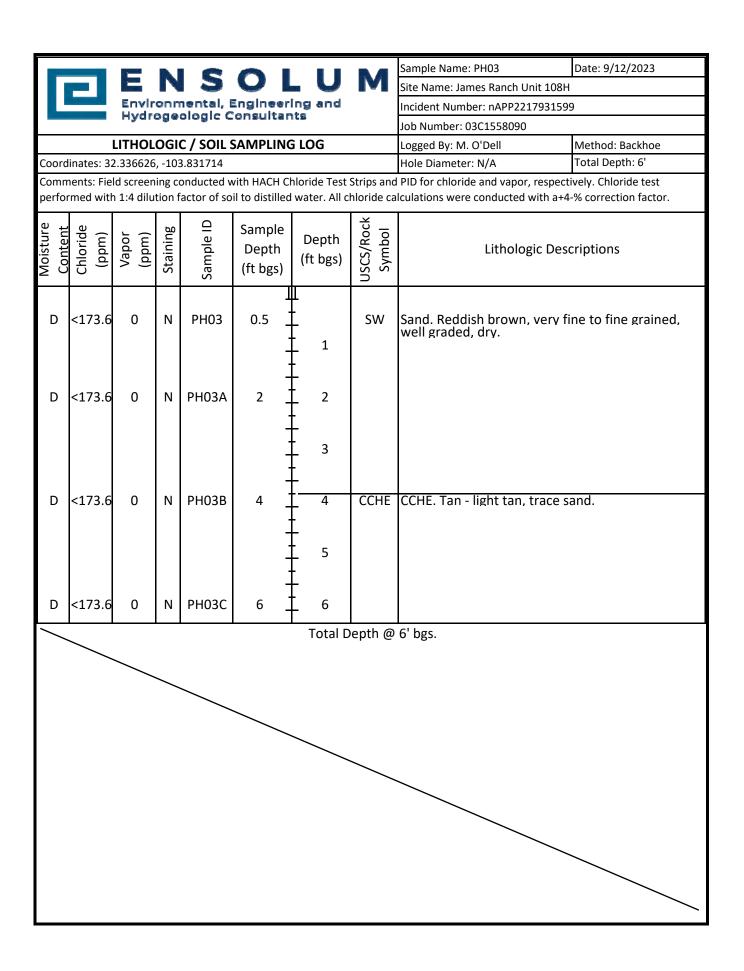


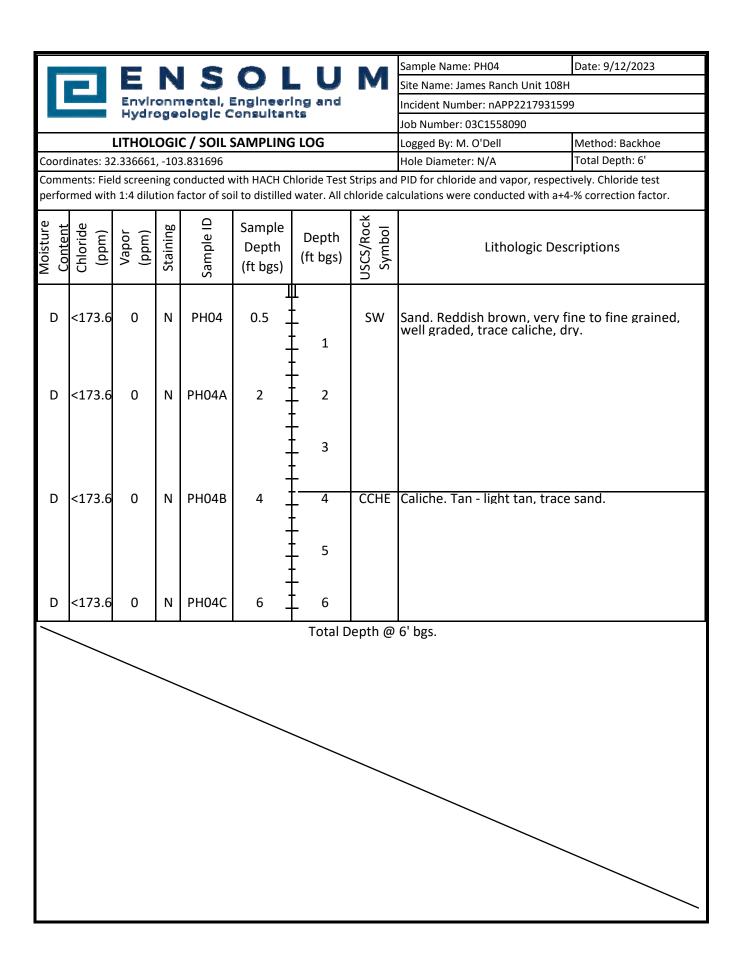


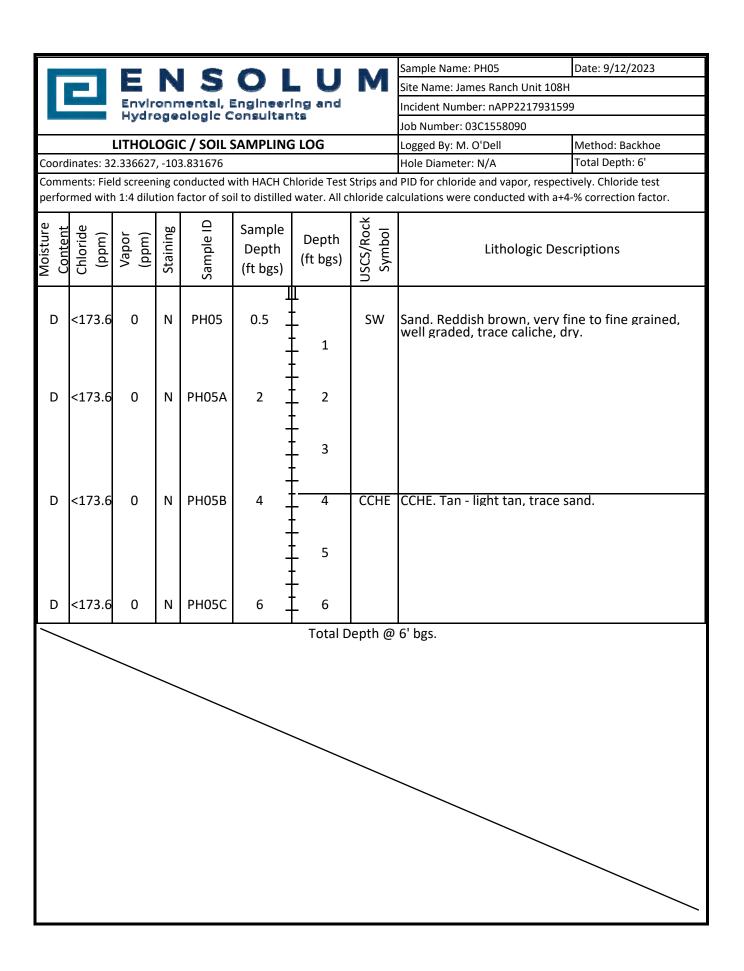
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.

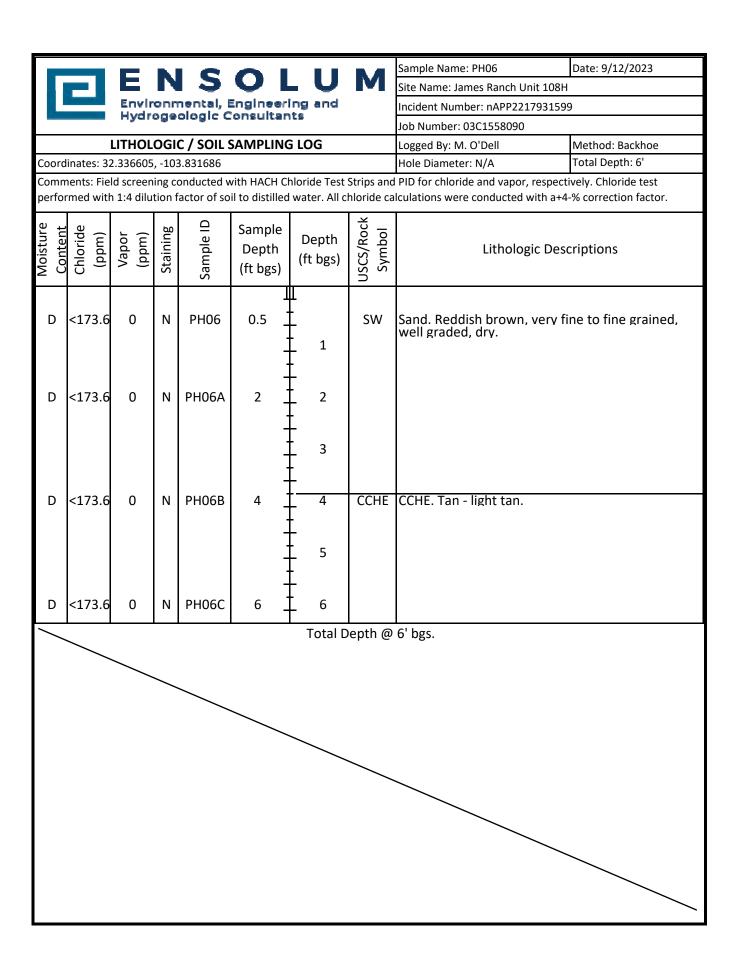
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry Dry Dry	<168 <168 <168	0.3 0.2 0.2	N N N	BG05	0.5 _ 1 _ 2 _	1 1 2	SP	SAND, veryfine, brown, poorly sorted, with silt. No stain or odor.
Dry	<168	0.1	N		3	3		
Dry	156	0.0	N		4 _	_ _ 4 _	CCHE	CALICHE, with very fine tan sand. No stain, no odor.
Dry	268	0.0	N		5 _	_ 5 -		CALICHE with tan sand and silt. No stain, no odor.
Dry	268	0.0	N		6 -	6		
Dry	229	0.0	N	BG05	7 _	7		













APPENDIX B

Photographic Log



Photographic Log
XTO Energy, Inc
James Ranch Unit 108H
Incident Number nAPP2217931599





Photograph 1 Date: 7/26/2022 Description: Site assessment activities, release extent

View: Southwest

Photograph 2 Date: 9/8/2022
Description: Delineation activities, release extent
View: Northwest



Photograph 3 Date: 9/8/2022 Description: Delineation activities, release extent

View: South



Photograph 4 Date: 10/20/2022

Description: Delineation activities, PH01

View: East



Photographic Log
XTO Energy, Inc
James Ranch Unit 108H
Incident Number nAPP2217931599





Photograph 5 Date: 9/14/2023

Description: Excavation activities, cribbing setup.

View: North

Photograph 6 Date: 9/18/2023

Description: Excavation extent

View: North





Photograph 7
Description: Excavation extent.

View: North

Photograph 8 Date: 10/13/2023

Description: Excavation backfilled.

View: Northwest

Date: 9/18/2023



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 9/21/2023 1:39:46 PM

JOB DESCRIPTION

JRU 108H SDG NUMBER 03C1558090

JOB NUMBER

890-5272-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated 9/21/2023 1:39:46 PM

9/21/2023

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

Page 2 of 20

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-5272-1
SDG: 03C1558090

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receint Checklists	19

Definitions/Glossary

Job ID: 890-5272-1 Client: Ensolum Project/Site: JRU 108H SDG: 03C1558090

Qualifiers

GC VOA

Qualifier **Qualifier Description** S1-Surrogate recovery exceeds control limits, low biased.

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

Glossary

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

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

MDL Method Detection Limit Minimum Level (Dioxin) ML

MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit PRES Presumptive

QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Job ID: 890-5272-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5272-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 9/14/2023 4:40 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 4.2° C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: FS01 (890-5272-1).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS01 (890-5272-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-62674 and analytical batch 880-62672 was outside the control limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-62709 and analytical batch 880-62666 was outside the 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.

3

4

5

8

10

12

13

14

Matrix: Solid

Lab Sample ID: 890-5272-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: FS01

Date Collected: 09/14/23 14:50 Date Received: 09/14/23 16:40

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/18/23 15:08	09/19/23 00:39	
Toluene	<0.00199	U	0.00199	mg/Kg		09/18/23 15:08	09/19/23 00:39	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/18/23 15:08	09/19/23 00:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/18/23 15:08	09/19/23 00:39	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		09/18/23 15:08	09/19/23 00:39	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/18/23 15:08	09/19/23 00:39	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	98		70 - 130			09/18/23 15:08	09/19/23 00:39	1
1,4-Difluorobenzene (Surr)	56	S1-	70 - 130			09/18/23 15:08	09/19/23 00:39	1
- Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/19/23 00:39	1
Mothod: SW846 8015 NM - Dioce	ol Pango Organ	ice (DPO) (CC)					
	•		•	Unit	n	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	•	Qualifier	GC) RL 50.3	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/18/23 17:08	Dil Fac
Analyte Total TPH	Result < 50.3	Qualifier U	RL 50.3		<u>D</u>	Prepared		Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.3 sel Range Orga	Qualifier U	RL 50.3		D		09/18/23 17:08	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.3 sel Range Orga	Qualifier Unics (DRO) Qualifier	RL 50.3 (GC)	mg/Kg		Prepared	09/18/23 17:08 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <50.3 sel Range Orga	Qualifier Unics (DRO) Qualifier	RL 50.3	mg/Kg			09/18/23 17:08	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.3 sel Range Orga	Qualifier U nics (DRO) Qualifier U	RL 50.3 (GC)	mg/Kg		Prepared	09/18/23 17:08 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.3 sel Range Orga Result <50.3	Qualifier U nics (DRO) Qualifier U	RL 50.3 (GC) RL 50.3	mg/Kg Unit mg/Kg		Prepared 09/18/23 10:20	09/18/23 17:08 Analyzed 09/18/23 17:08	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.3	Qualifier U nics (DRO) Qualifier U U	RL 50.3 (GC) RL 50.3 50.3	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20	09/18/23 17:08 Analyzed 09/18/23 17:08 09/18/23 17:08	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.3	Qualifier U nics (DRO) Qualifier U U	RL 50.3 (GC) RL 50.3 50.3 50.3	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20	09/18/23 17:08 Analyzed 09/18/23 17:08 09/18/23 17:08 09/18/23 17:08	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U nics (DRO) Qualifier U U	RL 50.3 (GC) RL 50.3 50.3 50.3 <i>Limits</i>	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared	O9/18/23 17:08 Analyzed O9/18/23 17:08 O9/18/23 17:08 O9/18/23 17:08 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 50.3 (GC) RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared 09/18/23 10:20	09/18/23 17:08 Analyzed 09/18/23 17:08 09/18/23 17:08 09/18/23 17:08 Analyzed 09/18/23 17:08	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 50.3 (GC) RL 50.3 50.3 50.3 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared 09/18/23 10:20	09/18/23 17:08 Analyzed 09/18/23 17:08 09/18/23 17:08 09/18/23 17:08 Analyzed 09/18/23 17:08	Dil Fac

Eurofins Carlsbad

2

3

4

6

40

11

13

14

Surrogate Summary

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5272-1	FS01	98	56 S1-
890-5274-A-21-A MS	Matrix Spike	102	115
890-5274-A-21-B MSD	Matrix Spike Duplicate	99	106
LCS 880-62599/1-A	Lab Control Sample	100	115
LCSD 880-62599/2-A	Lab Control Sample Dup	100	106
MB 880-62599/5-A	Method Blank	71	98
MB 880-62674/5-A	Method Blank	69 S1-	97

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

		1001	ОТРН1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-5272-1	FS01	118	127	
890-5278-A-10-F MS	Matrix Spike	111	108	
890-5278-A-10-G MSD	Matrix Spike Duplicate	105	101	
_CS 880-62709/2-A	Lab Control Sample	97	107	
_CSD 880-62709/3-A	Lab Control Sample Dup	91	100	
MB 880-62709/1-A	Method Blank	67 S1-	73	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-5272-1 Project/Site: JRU 108H SDG: 03C1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62599/5-A

Lab Sample ID: LCS 880-62599/1-A

Matrix: Solid Analysis Batch: 62672 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62599

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/18/23 15:08	09/18/23 21:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/18/23 15:08	09/18/23 21:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/18/23 15:08	09/18/23 21:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/18/23 15:08	09/18/23 21:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/18/23 15:08	09/18/23 21:54	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		09/18/23 15:08	09/18/23 21:54	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	09/18/23 15:08	09/18/23 21:54	1
1,4-Difluorobenzene (Surr)	98		70 - 130	09/18/23 15:08	09/18/23 21:54	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 62599

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.07810 mg/Kg 78 70 - 130 Toluene 0.100 0.08476 mg/Kg 85 70 - 130 0.100 83 Ethylbenzene 0.08259 mg/Kg 70 - 130 0.200 0.1713 86 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.08671 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	100	70 - 130
1,4-Difluorobenzene (Surr)	115	70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Matrix: Solid

Analysis Batch: 62672

Analysis Batch: 62672

Lab Sample ID: LCSD 880-62599/2-A

Prep Type: Total/NA Prep Batch: 62599

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08604		mg/Kg		86	70 - 130	10	35	
Toluene	0.100	0.08846		mg/Kg		88	70 - 130	4	35	
Ethylbenzene	0.100	0.08613		mg/Kg		86	70 - 130	4	35	
m-Xylene & p-Xylene	0.200	0.1791		mg/Kg		90	70 - 130	4	35	
o-Xylene	0.100	0.09090		mg/Kg		91	70 - 130	5	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	100	70 - 130
1,4-Difluorobenzene (Surr)	106	70 - 130

Lab Sample ID: 890-5274-A-21-A MS

Matrix: Solid

Analysis Batch: 62672

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

Prep Batch: 62599

		Sample	Sample	Spike	MS	MS				%Rec	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	<0.00199	U	0.0998	0.08115		mg/Kg	_	81	70 - 130	
١	Toluene	<0.00199	U	0.0998	0.08570		mg/Kg		86	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-5272-1 Project/Site: JRU 108H SDG: 03C1558090

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

Lab Sample ID: 890-5274-A-21-A MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid Analysis Batch: 62672

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00199	U	0.0998	0.08302		mg/Kg	_	83	70 - 130	
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1706		mg/Kg		85	70 - 130	
o-Xylene	<0.00199	U	0.0998	0.08580		mg/Kg		86	70 - 130	

MS MS

Surrogate	%Recovery Qualifi	er Limits
4-Bromofluorobenzene (Surr)	102	70 - 130
1,4-Difluorobenzene (Surr)	115	70 - 130

Lab Sample ID: 890-5274-A-21-B MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 62672

Prep Type: Total/NA

Prep Batch: 62599

RPD

Prep Batch: 62599

Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 0.0996 Benzene <0.00199 U 0.07875 mg/Kg 79 70 - 130 3 35 0.0996 82 Toluene <0.00199 0.08119 mg/Kg 70 - 130 5 35 Ethylbenzene <0.00199 U 0.0996 0.07757 mg/Kg 78 70 - 130 35 0.199 80 70 - 130 35 m-Xylene & p-Xylene <0.00398 U 0.1592 mg/Kg 0.0996 <0.00199 U 0.07997 80 70 - 130 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 _ 130
1.4-Difluorobenzene (Surr)	106	70 - 130

Lab Sample ID: MB 880-62674/5-A

Matrix: Solid

Analysis Batch: 62672

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62674

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/18/23 08:50	09/18/23 11:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/18/23 08:50	09/18/23 11:16	1

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	69	S1-	70 - 130	09/18/23 08:50	09/18/23 11:16	1
1,4-Difluorobenzene (Surr)	97		70 - 130	09/18/23 08:50	09/18/23 11:16	1

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

Lab Sample ID: MB 880-62709/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 62666

MB MB Result Qualifier RL Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 09/18/23 08:00 09/18/23 08:29

(GRO)-C6-C10

Eurofins Carlsbad

Prep Batch: 62709

o-Terphenyl

QC Sample Results

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

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

Lab Sample ID: MB 880-62709/1-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 62666	Prep Batch: 62709
MB MB	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/18/23 08:00	09/18/23 08:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/18/23 08:00	09/18/23 08:29	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130			09/18/23 08:00	09/18/23 08:29	1
o-Terphenyl	73		70 - 130			09/18/23 08:00	09/18/23 08:29	1

Lab Sample ID: LCS 880-62 Matrix: Solid	709/2-A						Client	Sample	ID: Lab Control Samp Prep Type: Total/l
Analysis Batch: 62666									Prep Batch: 627
			Spike	LCS	LCS				%Rec
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics			1000	1032		mg/Kg		103	70 - 130
(GRO)-C6-C10									
Diesel Range Organics (Over			1000	918.8		mg/Kg		92	70 - 130
C10-C28)									
	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	97		70 - 130						

70 - 130

Lab Sample ID: LCSD 880-62709/3-A				Clier	nt Sam	iple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid							Prep 1	Type: To	tal/NA
Analysis Batch: 62666							Prep	Batch:	62709
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	983.6		mg/Kg		98	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	875.2		mg/Kg		88	70 - 130	5	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	100		70 - 130

107

Lab Sample ID: 890-5278-A Matrix: Solid Analysis Batch: 62666	-10-F MS							Client		Matrix Spike pe: Total/NA satch: 62709
7 maryolo Batom 62000	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	992	1145		mg/Kg		113	70 - 130	
Diesel Range Organics (Over C10-C28)	50.6		992	871.7		mg/Kg		83	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane			70 - 130							
o-Terphenyl	108		70 - 130							

Client: Ensolum Job ID: 890-5272-1 Project/Site: JRU 108H SDG: 03C1558090

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

Lab Sample ID: 890-5278-A-10-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 62666 Prep Type: Total/NA Prep Batch: 62709

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Sample Sample Spike MSD MSD RPD Limit Result Qualifier RPD Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <50.3 U 992 1117 mg/Kg 110 70 - 130 3 20 (GRO)-C6-C10 992 Diesel Range Organics (Over 50.6 819.7 mg/Kg 78 70 - 130 6

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	101		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62713/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 62902

мв мв

	Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	<5.00 U	5.00	mg/Kg			09/20/23 17:30	1

Lab Sample ID: LCS 880-62713/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 62902

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	246.9	-	mg/Kg		99	90 - 110	

Lab Sample ID: LCSD 880-62713/3-A

Matrix: Solid

Analysis Batch: 62902

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	246.8		mg/Kg		99	90 - 110	0	20	

Lab Sample ID: 880-33333-A-11-B MS

Matrix: Solid

Analysis Batch: 62902

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	103		250	353 1		ma/Ka	_	100	90 110	

Lab Sample ID: 880-33333-A-11-C MSD

Matrix: Solid

Analysis Batch: 62902

Allalysis Dalcii. 02302											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	103		250	352.8		mg/Kg		100	90 - 110		20

QC Association Summary

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

GC VOA

Prep Batch: 62599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5272-1	FS01	Total/NA	Solid	5035	_
MB 880-62599/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62599/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62599/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5274-A-21-A MS	Matrix Spike	Total/NA	Solid	5035	
890-5274-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5272-1	FS01	Total/NA	Solid	8021B	62599
MB 880-62599/5-A	Method Blank	Total/NA	Solid	8021B	62599
MB 880-62674/5-A	Method Blank	Total/NA	Solid	8021B	62674
LCS 880-62599/1-A	Lab Control Sample	Total/NA	Solid	8021B	62599
LCSD 880-62599/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62599
890-5274-A-21-A MS	Matrix Spike	Total/NA	Solid	8021B	62599
890-5274-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62599

Prep Batch: 62674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62674/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 62800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5272-1	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 62666

Lab Sample ID 890-5272-1	Client Sample ID FS01	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 62709
MB 880-62709/1-A	Method Blank	Total/NA	Solid	8015B NM	62709
LCS 880-62709/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62709
LCSD 880-62709/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62709
890-5278-A-10-F MS	Matrix Spike	Total/NA	Solid	8015B NM	62709
890-5278-A-10-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62709

Prep Batch: 62709

Lab Sample ID 890-5272-1	Client Sample ID FS01	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-62709/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62709/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62709/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5278-A-10-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5278-A-10-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5272-1	FS01	Total/NA	Solid	8015 NM	

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

HPLC/IC

Leach Batch: 62713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5272-1	FS01	Soluble	Solid	DI Leach	
MB 880-62713/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62713/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62713/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33333-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33333-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 62902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5272-1	FS01	Soluble	Solid	300.0	62713
MB 880-62713/1-A	Method Blank	Soluble	Solid	300.0	62713
LCS 880-62713/2-A	Lab Control Sample	Soluble	Solid	300.0	62713
LCSD 880-62713/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62713
880-33333-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	62713
880-33333-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62713

1

7

9

10

111

Lab Chronicle

Client: Ensolum Job ID: 890-5272-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: FS01

Lab Sample ID: 890-5272-1 Date Collected: 09/14/23 14:50

Matrix: Solid

Date Received: 09/14/23 16:40

	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	62599	09/18/23 15:08	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62672	09/19/23 00:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62800	09/19/23 00:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			62827	09/18/23 17:08	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	62709	09/18/23 10:20	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62666	09/18/23 17:08	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	62713	09/18/23 11:01	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62902	09/20/23 20:25	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-23-26	06-30-24
The following analytes	and the almost and the Alaba management has			
the agency does not of	• '	it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for
,	• '	Matrix	led by the governing authority. I his list ma	ay include analytes for
the agency does not of	fer certification.	•	, , ,	ay include analytes for

2

4

5

7

9

10

14

Method Summary

 Client: Ensolum
 Job ID: 890-5272-1

 Project/Site: JRU 108H
 SDG: 03C1558090

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

1

3

4

5

7

9

10

12

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-5272-1 SDG: 03C1558090

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Depth

 890-5272-1
 FS01
 Solid
 09/14/23 14:50
 09/14/23 16:40
 1

3

4

5

9

10

12

13

Chain of Custody

eurofins		Environment Testing	t Testing		Ī	ouston, TX	(281) 24(0-4200, D	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland TX (433) 704 5440 San Antonio TX (210) 500-3334	Work Order No:	r No.
	Xe	Xenco			E	Paso, TX	(915) 585	-3443, Lui	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296		
					픙	bbs. NM (575) 392-	7550, Carl	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com	o.com Page(of
Project Manager:	Ben Belill			Bil	Bill to: (if different)	rent)	Garrett Green	Green		Work C	Work Order Comments
Company Name:	Ensolum			Co	Company Name:	me:	XTO Energy	ergy		Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐	Brownfields RRC Superfund
Address:	3122 National Parks Hwy	arks Hwy		Ac	Address:		3104 E.	3104 E. Green St	t	State of Project:	
City, State ZIP:	Carlsbad, NM 88220	8220		C)	City, State ZIP:	٩	Carlsba	Carlsbad, NM 88220	220	Reporting: Level II Level III PST/UST TRRP	PST/UST TRRP Level IV
Phone:	303-887-2946			Email: G	Garrett.Green@ExxonMobil.com	en@Exx	onMobi	.com		Deliverables: EDD	ADaPT Other:
Project Name:	JRI	JRU 108H		Turn Around	round				ANALYSIS RE	EQUEST	Preservative Codes
Project Number:	03C	03C1558090		Routine [Rush	Code					None: NO DI Water: H ₂ O
Project Location:			Due	Due Date:					-	_	Cool: Cool MeOH: Me
Sampler's Name:	Conno	Connor Whitman	TAT	starts the da	TAT starts the day received by	φ					HCL: HC HNO3: HN
SAMPLE RECEIPT	PT Temp Blank	ank: Wes	25	Wet Ice.	No.	eters	0)				H ₃ PO ₄ : HP
Samples Received Intact:	-		ometer IC	प	NAOC	7 Iran	000		890-5373 Chain of Chair		NaHSO ₄ : NABIS
Cooler Custody Seals:	s: Yes No		Correction Factor:		-0.2	P	PA:				Na ₂ S ₂ O ₃ : NaSO ₃
Sample Custody Seals:	s: Yes No	E	Temperature Reading:	ng:	2,2	L	S (E	1)		_	Zn Acetate+NaOH: Zn
Total Containers:		Correc	Corrected Temperature	ture:	4.2						NaOH+Ascorbic Acid: SAPC
Sample Identification	tification	Matrix San	Date T Sampled Sar	Time Sampled D	Depth Comp	np Cont	CHLOR	TPH (8			Sample Comments
FSOI		5 9/10	9/14/23 14	517	1, 6		//	/			Incident ID:
								+,			nAPP2217931599
		/			-						Cost Center:
		1	4								1139071001
				4							AFE:
						1	/	N N			
							/	/			
								-			
Total 200.7 / 6010 Circle Method(s) and I	10 200.8 / 6020:	20:	8RCRA	13PPM	Texas 11	1 Al Sb As	Sb As E	a Be B	Cd Ca Cr Co Cu Fe P	X Se A	₁ g SiO ₂ Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471
	3	-									
Notice: Signature of this of of service. Eurofins Xenco of Eurofins Xenco. A mini	locument and relinqui o will be liable only fo imum charge of \$85.0	shment of sampler the cost of sam	es constitutes a ples and shall no to each project a	valid purcha: ot assume an ind a charge	se order from ny responsibil of \$5 for each	client con	npany to El losses or e ubmitted to	urofins Xer expenses in Eurofins	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors 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 a 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 term	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	rol riated.
Relinquished by: (Signature)	: (Signature)	R	Received by: (Signature)	(Signature	9		Date/Time	ime	Relinquished by: (Signature)	ature) Received by: (Signature)	ignature) Date/Time
" Country		anon				۹	121.8	1.2	d)		
3									4		
O.									Ō		

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5272-1 SDG Number: 03C1558090

Login Number: 5272 List Source: Eurofins Carlsbad

List Number: 1

Creator: Lopez, Abraham

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

Login Sample Receipt Checklist

Client: Ensolum Job Nun

Job Number: 890-5272-1 SDG Number: 03C1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 09/18/23 08:43 AM

Creator: Rodriguez, Leticia

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

1

3

4

6

8

16

13

14

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 9/22/2023 10:28:27 AM

JOB DESCRIPTION

JRU 108H SDG NUMBER 03C1558090

JOB NUMBER

890-5273-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated 9/22/2023 10:28:27 AM

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

4

6

9

1 1

16

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-5273-1
SDG: 03C1558090

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	11
QC Sample Results	12
QC Association Summary	16
Lab Chronicle	19
Certification Summary	21
Method Summary	22
Sample Summary	23
Chain of Custody	24
Receipt Checklists	25

Definitions/Glossary

Client: Ensolum Job ID: 890-5273-1 SDG: 03C1558090 Project/Site: JRU 108H

Qualifiers

0		11	$\overline{}$	•
G	U	v	U	А

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

GC Semi VOA

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

HPLC/IC

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

Glossary

MDC

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

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)

Minimum Detectable Concentration (Radiochemistry)

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

Quality Control QC

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)

Too Numerous To Count TNTC

Case Narrative

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Job ID: 890-5273-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5273-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 9/14/2023~4:40~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 $4.2^{\circ}C$

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BG01 (890-5273-1), BG01 (890-5273-2), BG02 (890-5273-3), BG02 (890-5273-4), BG05 (890-5273-5) and BG05 (890-5273-6).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-62964 recovered above the upper control limit for m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-5273-A-1-F MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BG01 (890-5273-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BG02 (890-5273-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-62709 and analytical batch 880-62666 was outside the control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BG01 (890-5273-2), BG02 (890-5273-3) and BG05 (890-5273-6). 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.

3

4

5

7

9

4 4

12

13

Lab Sample ID: 890-5273-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: BG01

Date Collected: 09/11/23 02:05 Date Received: 09/14/23 16:40

Sample Depth: 7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 22:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 22:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 22:07	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		09/19/23 09:19	09/21/23 22:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 22:07	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/19/23 09:19	09/21/23 22:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130			09/19/23 09:19	09/21/23 22:07	1
1,4-Difluorobenzene (Surr)	71		70 - 130			09/19/23 09:19	09/21/23 22:07	1
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/21/23 22:07	1
Method: SW846 8015 NM - Diese	• •		•	llnit	ь.	Dronored	Anglyzad	Dil Ess
	• •		•	Unit	n	Propared	Analyzod	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	• •	Qualifier	GC) RL 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/18/23 17:29	Dil Fac
Analyte Total TPH	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared		Dil Fac
Analyte	Result <49.9 sel Range Orga	Qualifier U	RL 49.9		<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics	Result <49.9 sel Range Orga	Qualifier Unics (DRO) Qualifier	RL 49.9	mg/Kg		<u> </u>	09/18/23 17:29	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	RL 49.9 (GC)	mg/Kg		Prepared	09/18/23 17:29 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die	Result <49.9 sel Range Orga Result <49.9	Qualifier U nics (DRO) Qualifier U	(GC) RL 49.9	mg/Kg Unit mg/Kg		Prepared 09/18/23 10:20	09/18/23 17:29 Analyzed 09/18/23 17:29	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20	09/18/23 17:29 Analyzed 09/18/23 17:29 09/18/23 17:29 09/18/23 17:29	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20	09/18/23 17:29 Analyzed 09/18/23 17:29 09/18/23 17:29	Dil Face 1 1 1 Dil Face
Analyte Total TPH Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.9	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9 49.9 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared	Analyzed 09/18/23 17:29 Analyzed 09/18/23 17:29 09/18/23 17:29 09/18/23 17:29 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <49.9	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared 09/18/23 10:20	09/18/23 17:29 Analyzed 09/18/23 17:29 09/18/23 17:29 09/18/23 17:29 Analyzed 09/18/23 17:29	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.9	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared 09/18/23 10:20	09/18/23 17:29 Analyzed 09/18/23 17:29 09/18/23 17:29 09/18/23 17:29 Analyzed 09/18/23 17:29	Dil Fac 1 Dil Fac 1 1 Dil Fac 1 Dil Fac 1 Dil Fac

Client Sample ID: BG01

Date Collected: 09/11/23 15:00 Date Received: 09/14/23 16:40

Date Necestred. 03/14/20 10:4

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:27	1
Toluene	0.00304		0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:27	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/19/23 09:19	09/21/23 22:27	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:27	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/19/23 09:19	09/21/23 22:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	64	S1-	70 - 130			09/19/23 09:19	09/21/23 22:27	1

Eurofins Carlsbad

Lab Sample ID: 890-5273-2

Matrix: Solid

2

3

4

6

ŏ

10

12

Lab Sample ID: 890-5273-2

Client Sample Results

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: BG01

Date Collected: 09/11/23 15:00 Date Received: 09/14/23 16:40

Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	101		70 - 130	09/19/23 09:19	09/21/23 22:27	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/21/23 22:27	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			09/18/23 17:51	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		09/18/23 10:20	09/18/23 17:51	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		09/18/23 10:20	09/18/23 17:51	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		09/18/23 10:20	09/18/23 17:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

	Surrogate	%Recovery	Qualifier	Limits	Prepa	ared	Analyzed	Dil Fac
	1-Chlorooctane	134	S1+	70 - 130	09/18/23	3 10:20	09/18/23 17:51	1
l	o-Terphenyl	139	S1+	70 - 130	09/18/23	3 10:20	09/18/23 17:51	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62.1		5.04	mg/Kg			09/20/23 19:37	1

Client Sample ID: BG02 Lab Sample ID: 890-5273-3

Date Collected: 09/11/23 12:40 Date Received: 09/14/23 16:40

Sample Depth: 1

1		
Method: SW846 8021B	- Volatilo Organic C	'ampounde (CC)
I MELITOU. SYVOHO OUZ IL	• Voiatile Organic C	onibounus (GC)

Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:48	1
< 0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:48	1
<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:48	1
<0.00398	U	0.00398	mg/Kg		09/19/23 09:19	09/21/23 22:48	1
<0.00199	U	0.00199	mg/Kg		09/19/23 09:19	09/21/23 22:48	1
<0.00398	U	0.00398	mg/Kg		09/19/23 09:19	09/21/23 22:48	1
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
82		70 - 130			09/19/23 09:19	09/21/23 22:48	1
	<0.00199 <0.00199 <0.00398 <0.00199 <0.00398 %Recovery	Result Qualifier	<0.00199 U 0.00199 <0.00199 U 0.00199 <0.00199 U 0.00199 <0.00398 U 0.00398 <0.00199 U 0.00199 <0.00398 U 0.00398 %Recovery Qualifier Limits	<0.00199	<0.00199	<0.00199 U	<0.00199 U 0.00199 mg/Kg 09/19/23 09:19 09/21/23 22:48 <0.00199

_					
1,4-Difluorobenzene (Surr)	75	70 - 130	09/19/23 09:19	09/21/23 22:48	1
4-Bromofluorobenzene (Surr)	82	70 - 130	09/19/23 09:19	09/21/23 22:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg		_	09/21/23 22:48	1

Method: SW846 8015 NM - Diesel Range Organic	s (DRO)	(GC)
michiod. Offoro out of this - Diesel Mange Organic	,3 (DIXO)	1001

Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 l	U	50.0	mg/Kg			09/18/23 18:13	1

Eurofins Carlsbad

2

3

ر ک

9

11

13

14

Matrix: Solid

Lab Sample ID: 890-5273-3

Client: Ensolum Job ID: 890-5273-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: BG02

Date Collected: 09/11/23 12:40 Date Received: 09/14/23 16:40

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/18/23 10:20	09/18/23 18:13	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/18/23 10:20	09/18/23 18:13	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/18/23 10:20	09/18/23 18:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130			09/18/23 10:20	09/18/23 18:13	1
o-Terphenyl	143	S1+	70 - 130			09/18/23 10:20	09/18/23 18:13	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			5.03				09/20/23 19:43	

Client Sample ID: BG02 Lab Sample ID: 890-5273-4 Date Collected: 09/11/23 11:00 Matrix: Solid

Date Received: 09/14/23 16:40

Sample Depth: 7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 23:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 23:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 23:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/19/23 09:19	09/21/23 23:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 23:08	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/19/23 09:19	09/21/23 23:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			09/19/23 09:19	09/21/23 23:08	1
1,4-Difluorobenzene (Surr)	64	S1-	70 - 130			09/19/23 09:19	09/21/23 23:08	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
T-1-1 DTEV	<0.00399	11					00/04/00 00 00	
Total BTEX	~0.00399	U	0.00399	mg/Kg			09/21/23 23:08	1
• •				mg/Kg			09/21/23 23:08	1
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					·
Method: SW846 8015 NM - Diese Analyte	el Range Organ Result	ics (DRO) (mg/kg	D	Prepared	09/21/23 23:08 Analyzed	Dil Fac
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)		<u>D</u>	Prepared		·
Method: SW846 8015 NM - Diese Analyte	Result <50.3	ics (DRO) (Qualifier	RL 50.3	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ Result <50.3 sel Range Organ	ics (DRO) (Qualifier	RL 50.3	Unit	<u>D</u>	Prepared Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	el Range Organ Result <50.3 sel Range Organ	ics (DRO) (Outline DRO) Qualifier Qualifier Qualifier	RL 50.3	<mark>Unit</mark> mg/Kg		<u> </u>	Analyzed 09/18/23 18:34	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	el Range Organ Result <50.3 sel Range Organ Result	ics (DRO) (Outline DRO) Qualifier Qualifier Qualifier	GC) RL 50.3 (GC) RL	Unit mg/Kg		Prepared	Analyzed 09/18/23 18:34 Analyzed	Dil Fac Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	el Range Organ Result <50.3 sel Range Organ Result	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	GC) RL 50.3 (GC) RL	Unit mg/Kg		Prepared	Analyzed 09/18/23 18:34 Analyzed	Dil Fac Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <50.3 sel Range Orga Result <50.3 <50.3	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	GC) RL 50.3 (GC) RL 50.3 50.3	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20	Analyzed 09/18/23 18:34 Analyzed 09/18/23 18:34 09/18/23 18:34	Dil Fac Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10	el Range Organ Result <50.3 sel Range Orga Result <50.3	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	(GC) RL 50.3 (GC) RL 50.3	Unit mg/Kg Unit mg/Kg		Prepared 09/18/23 10:20	Analyzed 09/18/23 18:34 Analyzed 09/18/23 18:34	Dil Fac Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	el Range Organ Result <50.3 sel Range Orga Result <50.3 <50.3	ics (DRO) ((Qualifier U nics (DRO) Qualifier U U	GC) RL 50.3 (GC) RL 50.3 50.3	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20	Analyzed 09/18/23 18:34 Analyzed 09/18/23 18:34 09/18/23 18:34	Dil Fac Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <50.3 sel Range Orga Result <50.3 <50.3 <50.3	ics (DRO) ((Qualifier U nics (DRO) Qualifier U U	GC) RL 50.3 (GC) RL 50.3 50.3 50.3	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20	Analyzed 09/18/23 18:34 Analyzed 09/18/23 18:34 09/18/23 18:34	Dil Fac Dil Fac 1 1 1

Lab Sample ID: 890-5273-4

Client Sample Results

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: BG02

Date Collected: 09/11/23 11:00 Date Received: 09/14/23 16:40

Sample Depth: 7

Method: EPA 300.0 - Anions, Ion C	hromatograp	hy - Soluble	е					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	181		5.05	mg/Kg			09/20/23 20:03	1

Client Sample ID: BG05

Date Collected: 09/11/23 10:40

Lab Sample ID: 890-5273-5

Matrix: Solid

Date Collected: 09/11/23 10:40 Date Received: 09/14/23 16:40

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U	0.00201	mg/Kg		09/19/23 09:19	09/21/23 23:28	
Toluene	<0.00201	U	0.00201	mg/Kg		09/19/23 09:19	09/21/23 23:28	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/19/23 09:19	09/21/23 23:28	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/19/23 09:19	09/21/23 23:28	
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/19/23 09:19	09/21/23 23:28	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/19/23 09:19	09/21/23 23:28	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	95		70 - 130			09/19/23 09:19	09/21/23 23:28	
1,4-Difluorobenzene (Surr)	75		70 - 130			09/19/23 09:19	09/21/23 23:28	
· Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/21/23 23:28	
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Method: SW846 8015 NM - Diese Analyte		ics (DRO) (G	GC)	Unit	D	Prepared	Analyzed	Dil Fa
		Qualifier		Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/18/23 18:56	Dil Fac
Analyte	Result <50.2	Qualifier U			<u>D</u>	Prepared		
Analyte Total TPH	Result <50.2 sel Range Orga	Qualifier U			D D	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <50.2 sel Range Orga	Qualifier U nics (DRO) Qualifier	RL 50.2 (GC)	mg/Kg		<u> </u>	09/18/23 18:56	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.2 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	RL 50.2 (GC)	mg/Kg		Prepared	09/18/23 18:56 Analyzed	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.2 sel Range Orga Result <50.2	Qualifier U nics (DRO) Qualifier U	RL	mg/Kg Unit mg/Kg		Prepared 09/18/23 10:20	09/18/23 18:56 Analyzed 09/18/23 18:56	Dil Fa
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.2 sel Range Orga Result <50.2	Qualifier U nics (DRO) Qualifier U	RL	mg/Kg Unit mg/Kg		Prepared 09/18/23 10:20	09/18/23 18:56 Analyzed 09/18/23 18:56	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier U nics (DRO) Qualifier U U	RL 50.2 (GC) RL 50.2 50.2	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20	09/18/23 18:56 Analyzed 09/18/23 18:56 09/18/23 18:56	
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.2	Qualifier U nics (DRO) Qualifier U U	RL 50.2 (GC) RL 50.2 50.2 50.2	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20	O9/18/23 18:56 Analyzed O9/18/23 18:56 O9/18/23 18:56 O9/18/23 18:56	Dil Fa

Eurofins Carlsbad

Analyzed 09/20/23 20:10

RL

5.01

Unit

mg/Kg

D

Prepared

Result Qualifier

113

Dil Fac

Analyte

Chloride

Lab Sample ID: 890-5273-6

Client Sample Results

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: BG05

Date Collected: 09/11/23 11:10 Date Received: 09/14/23 16:40

Sample Depth: 7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/19/23 09:19	09/21/23 23:49	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/19/23 09:19	09/21/23 23:49	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/19/23 09:19	09/21/23 23:49	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		09/19/23 09:19	09/21/23 23:49	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/19/23 09:19	09/21/23 23:49	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		09/19/23 09:19	09/21/23 23:49	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			09/19/23 09:19	09/21/23 23:49	1
1,4-Difluorobenzene (Surr)	74		70 - 130			09/19/23 09:19	09/21/23 23:49	1
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/21/23 23:49	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) ((GC)					
	•	ics (DRO) (GC)	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	•	Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/18/23 19:18	Dil Fac
Analyte Total TPH	Result <50.4	Qualifier U	RL 50.4		<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Die	Result <50.4	Qualifier U	RL 50.4		<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics	Result <50.4	Qualifier Unics (DRO) Qualifier	RL 50.4 (GC)	mg/Kg			09/18/23 19:18	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.4 sel Range Orga	Qualifier U nics (DRO) Qualifier U	RL 50.4 (GC)	mg/Kg		Prepared	09/18/23 19:18 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.4 Sel Range Orga Result <50.4	Qualifier U nics (DRO) Qualifier U	RL 50.4 (GC) RL 50.4	mg/Kg Unit mg/Kg		Prepared 09/18/23 10:20	09/18/23 19:18 Analyzed 09/18/23 19:18	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.4	Qualifier U nics (DRO) Qualifier U U	RL 50.4 (GC) RL 50.4 50.4	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20	09/18/23 19:18 Analyzed 09/18/23 19:18 09/18/23 19:18	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.4	Qualifier U nics (DRO) Qualifier U U	RL 50.4 (GC) RL 50.4 50.4	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20	O9/18/23 19:18 Analyzed O9/18/23 19:18 O9/18/23 19:18 O9/18/23 19:18	Dil Face
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10	Result	Qualifier U nics (DRO) Qualifier U U	RL 50.4 (GC) RL 50.4 50.4 50.4 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared	O9/18/23 19:18 Analyzed O9/18/23 19:18 O9/18/23 19:18 O9/18/23 19:18 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U nics (DRO) Qualifier U U Qualifier S1+	RL 50.4 (GC) RL 50.4 50.4 50.4 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared 09/18/23 10:20	O9/18/23 19:18 Analyzed O9/18/23 19:18 O9/18/23 19:18 O9/18/23 19:18 Analyzed O9/18/23 19:18	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U nics (DRO) Qualifier U U Qualifier S1+	RL 50.4 (GC) RL 50.4 50.4 50.4 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/18/23 10:20 09/18/23 10:20 09/18/23 10:20 Prepared 09/18/23 10:20	O9/18/23 19:18 Analyzed O9/18/23 19:18 O9/18/23 19:18 O9/18/23 19:18 Analyzed O9/18/23 19:18	

Surrogate Summary

Client: Ensolum Job ID: 890-5273-1 Project/Site: JRU 108H SDG: 03C1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance L
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5273-1	BG01	90	71	
890-5273-1 MS	BG01	134 S1+	93	
390-5273-1 MSD	BG01	127	98	
390-5273-2	BG01	64 S1-	101	
890-5273-3	BG02	82	75	
390-5273-4	BG02	91	64 S1-	
390-5273-5	BG05	95	75	
390-5273-6	BG05	93	74	
_CS 880-62786/1-A	Lab Control Sample	128	100	
.CSD 880-62786/2-A	Lab Control Sample Dup	130	97	
MB 880-62786/5-A	Method Blank	73	90	
MB 880-62886/5-A	Method Blank	72	94	
Surrogate Legend				
BFB = 4-Bromofluorobenz	ene (Surr)			
DFBZ = 1,4-Difluorobenze	ne (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Lin
		1001	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-5273-1	BG01	122	126	
90-5273-2	BG01	134 S1+	139 S1+	
90-5273-3	BG02	137 S1+	143 S1+	
90-5273-4	BG02	121	126	
90-5273-5	BG05	116	119	
90-5273-6	BG05	126	131 S1+	
90-5278-A-10-F MS	Matrix Spike	111	108	
90-5278-A-10-G MSD	Matrix Spike Duplicate	105	101	
.CS 880-62709/2-A	Lab Control Sample	97	107	
CSD 880-62709/3-A	Lab Control Sample Dup	91	100	
MB 880-62709/1-A	Method Blank	67 S1-	73	

Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-5273-1 Project/Site: JRU 108H SDG: 03C1558090

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62786/5-A

Lab Sample ID: LCS 880-62786/1-A

Matrix: Solid

Analysis Batch: 62964

Matrix: Solid Analysis Batch: 62964 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62786

1

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 21:45	
Toluene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 21:45	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 21:45	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/19/23 09:19	09/21/23 21:45	
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/19/23 09:19	09/21/23 21:45	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/19/23 09:19	09/21/23 21:45	

MB MB

MD MD

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73	70 - 130	09/19/23 09:19	09/21/23 21:45	1
1,4-Difluorobenzene (Surr)	90	70 - 130	09/19/23 09:19	09/21/23 21:45	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 62786

Prep Type: Total/NA Prep Batch: 62786

35

35

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.07199 mg/Kg 72 70 - 130 Toluene 0.100 0.08136 mg/Kg 81 70 - 130 0.100 0.09307 93 Ethylbenzene mg/Kg 70 - 130 0.200 0.1937 97 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.09886 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	128	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

Client Sample ID: Lab Control Sample Dup

116

70 - 130

70 - 130

Matrix: Solid

Analyte Benzene Toluene Ethylbenzene

o-Xylene

Analysis Batch: 62964

Lab Sample ID: LCSD 880-62786/2-A

Spike	LCSD	LCSD				%Rec		RPD	
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
0.100	0.08444		mg/Kg		84	70 - 130	16	35	
0.100	0.09277		mg/Kg		93	70 - 130	13	35	
0.100	0.1113		mg/Kg		111	70 - 130	18	35	

mg/Kg

mg/Kg

LCSD LCSD

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

Lab Sample ID: 890-5273-1 MS

Matrix: Solid

m-Xylene & p-Xylene

Analysis Batch: 62964

Client Sample ID: BG01 Prep Type: Total/NA

Prep Batch: 62786

16

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0998	0.09211		mg/Kg		92	70 - 130	
Toluene	<0.00200	U	0.0998	0.1089		mg/Kg		109	70 - 130	

0.200

0.100

0.1928

0.1158

Eurofins Carlsbad

Page 12 of 26

QC Sample Results

Client: Ensolum Job ID: 890-5273-1 SDG: 03C1558090 Project/Site: JRU 108H

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

Lab Sample ID: 890-5273-1 MS Client Sample ID: BG01 **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 62964 Prep Batch: 62786

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U	0.0998	0.1241		mg/Kg		124	70 - 130	
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2561		mg/Kg		128	70 - 130	
o-Xylene	<0.00200	U	0.0998	0.1259		mg/Kg		126	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 134 S1+ 70 - 130 1,4-Difluorobenzene (Surr) 70 - 130 93

Lab Sample ID: 890-5273-1 MSD **Client Sample ID: BG01 Matrix: Solid** Prep Type: Total/NA Prep Batch: 62786 Analysis Batch: 62964

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0990	0.08842		mg/Kg		89	70 - 130	4	35
Toluene	<0.00200	U	0.0990	0.09962		mg/Kg		101	70 - 130	9	35
Ethylbenzene	<0.00200	U	0.0990	0.1120		mg/Kg		113	70 - 130	10	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2284		mg/Kg		115	70 - 130	11	35
o-Xylene	<0.00200	U	0.0990	0.1117		mg/Kg		113	70 - 130	12	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: MB 880-62886/5-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 62964

Prep Batch: 62886 MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/20/23 10:13	09/21/23 11:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/20/23 10:13	09/21/23 11:12	1

	MB M	1B			
Surrogate	%Recovery Q	Qualifier Limit	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72	70 - 1	09/20/23 10:13	09/21/23 11:12	1
1,4-Difluorobenzene (Surr)	94	70 - 1	30 09/20/23 10:13	09/21/23 11:12	1

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

Lab Sample ID: MB 880-62709/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 62666 Prep Batch: 62709

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		09/18/23 08:00	09/18/23 08:29	1
(GRO)-C6-C10								

QC Sample Results

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

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

Lab Sample ID: MB 880-62709/1-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 62666	Prep Batch: 62709
AAD AAD	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/18/23 08:00	09/18/23 08:29	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/18/23 08:00	09/18/23 08:29	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130			09/18/23 08:00	09/18/23 08:29	1
o-Terphenyl	73		70 - 130			09/18/23 08:00	09/18/23 08:29	1

Lab Sample ID: LCS 880-62 Matrix: Solid	709/2-A						Client	Sample		e: Total/NA
Analysis Batch: 62666									•	atch: 62709
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	1032		mg/Kg		103	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	918.8		mg/Kg		92	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	97		70 - 130							
o-Terphenyl	107		70 - 130							

Lab Sample ID: LCSD 880-62709/3-A Client Sa					ıt San	t Sample ID: Lab Control Sample Dup					
Matrix: Solid	atrix: Solid						Prep 1	Гуре: То	tal/NA		
Analysis Batch: 62666							Prep	Batch:	62709		
	Spike	LCSD	LCSD				%Rec		RPD		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
Gasoline Range Organics (GRO)-C6-C10	1000	983.6		mg/Kg		98	70 - 130	5	20		
Diesel Range Organics (Over C10-C28)	1000	875.2		mg/Kg		88	70 - 130	5	20		

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: 890-5278-A-Matrix: Solid Analysis Batch: 62666	-10-F MS							Client	Prep T	: Matrix Spike ype: Total/NA Batch: 62709
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	992	1145		mg/Kg		113	70 - 130	
Diesel Range Organics (Over C10-C28)	50.6		992	871.7		mg/Kg		83	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane			70 - 130							
o-Terphenyl	108		70 - 130							

Prep Batch: 62709

Job ID: 890-5273-1 SDG: 03C1558090

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

Lab Sample ID: 890-5278-A-10-G MSD

Matrix: Solid

Analysis Batch: 62666

Client Sample	ID:	Matrix	Spike	Duplicate
		Pre	р Туре	: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Client Sample ID: BG01 **Prep Type: Soluble**

Client Sample ID: BG01

Prep Type: Soluble

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<50.3	U	992	1117		mg/Kg		110	70 - 130	3	20
(GRO)-C6-C10											
Diesel Range Organics (Over	50.6		992	819.7		mg/Kg		78	70 - 130	6	20
C10-C28)											

Client: Ensolum

Project/Site: JRU 108H

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	101		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62761/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 62905

мв мв

Analyte	Result Quali	fier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			09/20/23 17:23	1

Lab Sample ID: LCS 880-62761/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid **Prep Type: Soluble**

Analysis Batch: 62905

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	245.4		mg/Kg		98	90 - 110	

Lab Sample ID: LCSD 880-62761/3-A

Matrix: Solid

Analysis Batch: 62905

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	245.9		mg/Kg		98	90 - 110	0	20	

Lab Sample ID: 890-5273-1 MS

Matrix: Solid

Analysis Batch: 62905

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	156		251	407.1		ma/Ka	_	100	90 110	

Lab Sample ID: 890-5273-1 MSD

Released to Imaging: 3/11/2024 11:17:01 AM

Matrix: Solid

Analysis Batch: 62905

Analysis Dateil. 02303											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	156		251	407.9		mg/Kg		100	90 - 110		20

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

GC VOA

Prep Batch: 62786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Total/NA	Solid	5035	
890-5273-2	BG01	Total/NA	Solid	5035	
890-5273-3	BG02	Total/NA	Solid	5035	
890-5273-4	BG02	Total/NA	Solid	5035	
890-5273-5	BG05	Total/NA	Solid	5035	
890-5273-6	BG05	Total/NA	Solid	5035	
MB 880-62786/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62786/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62786/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5273-1 MS	BG01	Total/NA	Solid	5035	
890-5273-1 MSD	BG01	Total/NA	Solid	5035	

Prep Batch: 62886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62886/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 62964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Total/NA	Solid	8021B	62786
890-5273-2	BG01	Total/NA	Solid	8021B	62786
890-5273-3	BG02	Total/NA	Solid	8021B	62786
890-5273-4	BG02	Total/NA	Solid	8021B	62786
890-5273-5	BG05	Total/NA	Solid	8021B	62786
890-5273-6	BG05	Total/NA	Solid	8021B	62786
MB 880-62786/5-A	Method Blank	Total/NA	Solid	8021B	62786
MB 880-62886/5-A	Method Blank	Total/NA	Solid	8021B	62886
LCS 880-62786/1-A	Lab Control Sample	Total/NA	Solid	8021B	62786
LCSD 880-62786/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62786
890-5273-1 MS	BG01	Total/NA	Solid	8021B	62786
890-5273-1 MSD	BG01	Total/NA	Solid	8021B	62786

Analysis Batch: 63050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Total/NA	Solid	Total BTEX	
890-5273-2	BG01	Total/NA	Solid	Total BTEX	
890-5273-3	BG02	Total/NA	Solid	Total BTEX	
890-5273-4	BG02	Total/NA	Solid	Total BTEX	
890-5273-5	BG05	Total/NA	Solid	Total BTEX	
890-5273-6	BG05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 62666

Γ	011 10 1 15				5 5
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Total/NA	Solid	8015B NM	62709
890-5273-2	BG01	Total/NA	Solid	8015B NM	62709
890-5273-3	BG02	Total/NA	Solid	8015B NM	62709
890-5273-4	BG02	Total/NA	Solid	8015B NM	62709
890-5273-5	BG05	Total/NA	Solid	8015B NM	62709
890-5273-6	BG05	Total/NA	Solid	8015B NM	62709
MB 880-62709/1-A	Method Blank	Total/NA	Solid	8015B NM	62709

Eurofins Carlsbad

Page 16 of 26

2

3

4

6

8

11

40

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

GC Semi VOA (Continued)

Analysis Batch: 62666 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-62709/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62709
LCSD 880-62709/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62709
890-5278-A-10-F MS	Matrix Spike	Total/NA	Solid	8015B NM	62709
890-5278-A-10-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62709

Prep Batch: 62709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Total/NA	Solid	8015NM Prep	
890-5273-2	BG01	Total/NA	Solid	8015NM Prep	
890-5273-3	BG02	Total/NA	Solid	8015NM Prep	
890-5273-4	BG02	Total/NA	Solid	8015NM Prep	
890-5273-5	BG05	Total/NA	Solid	8015NM Prep	
890-5273-6	BG05	Total/NA	Solid	8015NM Prep	
MB 880-62709/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62709/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62709/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5278-A-10-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5278-A-10-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Total/NA	Solid	8015 NM	
890-5273-2	BG01	Total/NA	Solid	8015 NM	
890-5273-3	BG02	Total/NA	Solid	8015 NM	
890-5273-4	BG02	Total/NA	Solid	8015 NM	
890-5273-5	BG05	Total/NA	Solid	8015 NM	
890-5273-6	BG05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 62761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Soluble	Solid	DI Leach	
890-5273-2	BG01	Soluble	Solid	DI Leach	
890-5273-3	BG02	Soluble	Solid	DI Leach	
890-5273-4	BG02	Soluble	Solid	DI Leach	
890-5273-5	BG05	Soluble	Solid	DI Leach	
890-5273-6	BG05	Soluble	Solid	DI Leach	
MB 880-62761/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62761/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62761/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5273-1 MS	BG01	Soluble	Solid	DI Leach	
890-5273-1 MSD	BG01	Soluble	Solid	DI Leach	

Analysis Batch: 62905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-1	BG01	Soluble	Solid	300.0	62761
890-5273-2	BG01	Soluble	Solid	300.0	62761
890-5273-3	BG02	Soluble	Solid	300.0	62761
890-5273-4	BG02	Soluble	Solid	300.0	62761
890-5273-5	BG05	Soluble	Solid	300.0	62761

Eurofins Carlsbad

9/22/2023

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

HPLC/IC (Continued)

Analysis Batch: 62905 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5273-6	BG05	Soluble	Solid	300.0	62761
MB 880-62761/1-A	Method Blank	Soluble	Solid	300.0	62761
LCS 880-62761/2-A	Lab Control Sample	Soluble	Solid	300.0	62761
LCSD 880-62761/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62761
890-5273-1 MS	BG01	Soluble	Solid	300.0	62761
890-5273-1 MSD	BG01	Soluble	Solid	300.0	62761

1

5

7

0

10

13

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: BG01 Lab Sample ID: 890-5273-1

Date Collected: 09/11/23 02:05

Date Received: 09/14/23 16:40

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/21/23 22:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63050	09/21/23 22:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62828	09/18/23 17:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62709	09/18/23 10:20	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62666	09/18/23 17:29	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62761	09/18/23 14:41	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62905	09/20/23 19:17	SMC	EET MID

Client Sample ID: BG01 Lab Sample ID: 890-5273-2

Date Collected: 09/11/23 15:00 Matrix: Solid
Date Received: 09/14/23 16:40

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 Total/NA 5.02 g 5 mL 62786 09/19/23 09:19 MNR EET MID Total/NA 8021B 5 mL 62964 09/21/23 22:27 **EET MID** Analysis 1 5 mL MNR Total/NA Total BTEX 63050 09/21/23 22:27 Analysis 1 SM **EET MID** Total/NA Analysis 8015 NM 62828 09/18/23 17:51 SM **EET MID** Total/NA 62709 09/18/23 10:20 Prep 8015NM Prep 10.08 g 10 mL TKC EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 62666 09/18/23 17:51 SM **EET MID**

Client Sample ID: BG02 Lab Sample ID: 890-5273-3

4.96 g

50 mL

50 mL

50 mL

62761

62905

Date Collected: 09/11/23 12:40 Date Received: 09/14/23 16:40

Leach

Analysis

DI Leach

300.0

Soluble

Soluble

	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	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/21/23 22:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63050	09/21/23 22:48	SM	EET MID
Total/NA	Analysis	8015 NM		1			62828	09/18/23 18:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	62709	09/18/23 10:20	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62666	09/18/23 18:13	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	62761	09/18/23 14:41	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62905	09/20/23 19:43	SMC	EET MID

Client Sample ID: BG02 Lab Sample ID: 890-5273-4

Date Collected: 09/11/23 11:00 Date Received: 09/14/23 16:40

	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	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/21/23 23:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63050	09/21/23 23:08	SM	EET MID

Eurofins Carlsbad

Page 19 of 26

-0

3

4

7

9

10

12

14

09/18/23 14:41

09/20/23 19:37

AG

SMC

EET MID

EET MID

Matrix: Solid

Matrix: Solid

Lab Chronicle

Client: Ensolum Job ID: 890-5273-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: BG02

Date Received: 09/14/23 16:40

Lab Sample ID: 890-5273-4 Date Collected: 09/11/23 11:00

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA 8015 NM 62828 Analysis 09/18/23 18:34 SM EET MID Total/NA Prep 8015NM Prep 9.94 g 10 mL 62709 09/18/23 10:20 TKC **EET MID** Total/NA Analysis 8015B NM 1 uL 1 uL 62666 09/18/23 18:34 SM EET MID Soluble 50 mL 62761 09/18/23 14:41 EET MID Leach DI Leach 4.95 g AG 62905 09/20/23 20:03 Soluble Analysis 300.0 1 50 mL 50 mL SMC EET MID

Client Sample ID: BG05 Lab Sample ID: 890-5273-5

Date Collected: 09/11/23 10:40 **Matrix: Solid**

Date Received: 09/14/23 16:40

	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	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/21/23 23:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63050	09/21/23 23:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			62828	09/18/23 18:56	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	62709	09/18/23 10:20	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62666	09/18/23 18:56	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	62761	09/18/23 14:41	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62905	09/20/23 20:10	SMC	EET MID

Client Sample ID: BG05 Lab Sample ID: 890-5273-6

Date Received: 09/14/23 16:40

Date Collected: 09/11/23 11:10

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	62786	09/19/23 09:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62964	09/21/23 23:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63050	09/21/23 23:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			62828	09/18/23 19:18	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	62709	09/18/23 10:20	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62666	09/18/23 19:18	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62761	09/18/23 14:41	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62905	09/20/23 20:17	SMC	EET MID

Laboratory References:

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

Matrix: Solid

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Laboratory: Eurofins Midland

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

Authority Texas		ogram	Identification Number	Expiration Date
		ELAP	T104704400-23-26	06-30-24
The following analytes	are included in this report, bu	it the laboratory is not certific	ed by the governing authority. This list ma	v include analytes for
the agency does not of	fer certification.	,	, g	ly molado analytoo for
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	y molado analytoo for t
0 ,		•	, , ,	y mondo unalytoo tor y

1

3

4

6

4.0

11

13

Method Summary

 Client: Ensolum
 Job ID: 890-5273-1

 Project/Site: JRU 108H
 SDG: 03C1558090

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

,

3

4

6

9

11

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-5273-1 SDG: 03C1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5273-1	BG01	Solid	09/11/23 02:05	09/14/23 16:40	7
890-5273-2	BG01	Solid	09/11/23 15:00	09/14/23 16:40	2
890-5273-3	BG02	Solid	09/11/23 12:40	09/14/23 16:40	1
890-5273-4	BG02	Solid	09/11/23 11:00	09/14/23 16:40	7
890-5273-5	BG05	Solid	09/11/23 10:40	09/14/23 16:40	1
890-5273-6	BG05	Solid	09/11/23 11:10	09/14/23 16:40	7

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-5273-1

 SDG Number: 03C1558090

Login Number: 5273 List Source: Eurofins Carlsbad

List Number: 1

Creator: Lopez, Abraham

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

4

2

3

4

6

8

10

12

13

Login Sample Receipt Checklist

Client: Ensolum Job N

Job Number: 890-5273-1 SDG Number: 03C1558090

List Source: Eurofins Midland
List Number: 2
List Creation: 09/18/23 08:43 AM

Creator: Rodriguez, Leticia

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

0 *0j 432*

1

Eurofins Carlsbad

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 10/9/2023 11:59:07 AM Revision 1

JOB DESCRIPTION

JRU 108H SDG NUMBER 03C1558090

JOB NUMBER

890-5296-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated 10/9/2023 11:59:07 AM Revision 1

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies Page 2 of 51

Client: Ensolum
Project/Site: JRU 108H

Laboratory Job ID: 890-5296-1
SDG: 03C1558090

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	7
Surrogate Summary	21
QC Sample Results	23
QC Association Summary	33
Lab Chronicle	39
Certification Summary	45
Method Summary	46
Sample Summary	47
Chain of Custody	48
Receipt Checklists	50

Definitions/Glossary

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Qualifiers

GC VOA Qualifier

Qualifier Description MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not

applicable.

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

GC Semi VOA

Qualifier

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

F2 MS/MSD RPD exceeds control limits

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

HPLC/IC

Qualifier **Qualifier Description**

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

Percent Recovery %R **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) **EDL** LOD Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE) LOQ

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

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

Not Calculated NC

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

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit**

PRES Presumptive QC **Quality Control**

Relative Error Ratio (Radiochemistry) **RER**

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Job ID: 890-5296-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5296-1

REVISION

The report being provided is a revision of the original report sent on 9/27/2023. The report (revision 1) is being revised due to Per client email, requesting re runs on samples.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 9/19/2023 4:16 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS02 (890-5296-1), FS03 (890-5296-2), FS04 (890-5296-3), FS05 (890-5296-4), FS06 (890-5296-5), FS07 (890-5296-6), FS08 (890-5296-7), FS09 (890-5296-8), FS10 (890-5296-9), SW01 (890-5296-10), SW02 (890-5296-11), SW03 (890-5296-12), SW04 (890-5296-13), SW05 (890-5296-14), SW06 (890-5296-15), SW07 (890-5296-16) and SW08 (890-5296-17).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-62998 and analytical batch 880-63152 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW07 (890-5296-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with analytical batch 880-63183 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-33481-A-1-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-63021 and analytical batch 880-63283 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is 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 880-62999 and analytical batch 880-62961 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS10 (890-5296-9), SW01

3

Л

5

6

8

10

11

13

14

Case Narrative

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Job ID: 890-5296-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

(890-5296-10), SW02 (890-5296-11), SW03 (890-5296-12) and SW04 (890-5296-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-62999 and analytical batch 880-62961 was outside control limits. Sample non-homogeneity is suspected.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-33751-A-21-E MS) and (880-33751-A-21-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-63538 and analytical batch 880-63575 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is 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.

2

4

5

0

8

9

14

Eurofins Carlsbad 10/9/2023 (Rev. 1)

Matrix: Solid

Lab Sample ID: 890-5296-1

Analyzed

09/21/23 14:25 09/21/23 22:32

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: FS02

Date Collected: 09/18/23 13:30 Date Received: 09/19/23 16:16

Sample Depth: 1

Analyte

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 18:29	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 18:29	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 18:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/21/23 14:25	09/24/23 18:29	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 18:29	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/21/23 14:25	09/24/23 18:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130			09/21/23 14:25	09/24/23 18:29	1
1,4-Difluorobenzene (Surr)	100		70 - 130			09/21/23 14:25	09/24/23 18:29	1

	mg/Kg	09/24/23 18:29	
Method: SW846 8015 NM - Diesel Range Organics (DRO)		 	

RL

Unit

Prepared

Result Qualifier

108

Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	53.8		50.1	mg/Kg			09/21/23 22:32	1
Method: SW846 8015B NM	- Diesel Range	Organics (DRO) (GC)					

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		09/21/23 14:25	09/21/23 22:32	1
Diesel Range Organics (Over C10-C28)	53.8		50.1	mg/Kg		09/21/23 14:25	09/21/23 22:32	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		09/21/23 14:25	09/21/23 22:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			09/21/23 14:25	09/21/23 22:32	

	on Chromato	ography -	Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	169		4.95	mg/Kg			09/22/23 14:33	1

70 - 130

Client Sample ID: FS03 Lab Sample ID: 890-5296-2 Date Collected: 09/18/23 13:35

Date Received: 09/19/23 16:16

Released to Imaging: 3/11/2024 11:17:01 AM

Sample Depth: 4.5

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 18:50	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 18:50	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 18:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/21/23 14:25	09/24/23 18:50	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 18:50	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/21/23 14:25	09/24/23 18:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			09/21/23 14:25	09/24/23 18:50	1

Eurofins Carlsbad

Dil Fac

Matrix: Solid

Job ID: 890-5296-1 SDG: 03C1558090

Project/Site: JRU 108H

Client Sample ID: FS03

Lab San

Lab Sample ID: 890-5296-2

Date Collected: 09/18/23 13:35 Date Received: 09/19/23 16:16 **Matrix: Solid**

Sample Depth: 4.5

Client: Ensolum

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	101		70 - 130	09/21/23 14:25 09	9/24/23 18:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/24/23 18:50	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			09/21/23 22:53	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

	g	• . ga	() () ()					
Analyte	Result (Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2	mg/Kg		09/21/23 14:25	09/21/23 22:53	1
Diesel Range Organics (Over C10-C28)	<50.2 U	U	50.2	mg/Kg		09/21/23 14:25	09/21/23 22:53	1
Oll Range Organics (Over C28-C36)	<50.2 U	U	50.2	mg/Kg		09/21/23 14:25	09/21/23 22:53	1
Surrogate	%Recovery	Qualifier	l imits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	09/21/23 14:25	09/21/23 22:53	1
o-Terphenyl	106		70 - 130	09/21/23 14:25	09/21/23 22:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifie	er RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	184	4.99	mg/Kg			09/22/23 14:40	1

Client Sample ID: FS04

Date Collected: 09/18/23 13:40

Lab Sample ID: 890-5296-3

Matrix: Solid

Date Collected: 09/18/23 13:40 Date Received: 09/19/23 16:16

Sample Depth: 4.5

Method: SW846 8021B - Volatile Organic Compounds (CC	١.
Method. 344040 002 fb - Volatile Organic Compounds (GC	,

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/21/23 14:25	09/24/23 19:10	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/21/23 14:25	09/24/23 19:10	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/21/23 14:25	09/24/23 19:10	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		09/21/23 14:25	09/24/23 19:10	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/21/23 14:25	09/24/23 19:10	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		09/21/23 14:25	09/24/23 19:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130			09/21/23 14:25	09/24/23 19:10	1
1,4-Difluorobenzene (Surr)	110		70 - 130			09/21/23 14:25	09/24/23 19:10	1

Mothod:	TAL SOE	Total RTEY	- Total BTFX	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			09/24/23 19:10	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	59.4	50.5	mg/Kg			09/21/23 23:14	1

Eurofins Carlsbad

5

3

4

6

o

1 1

4.0

14

Tomic Ganesia

Job ID: 890-5296-1

Matrix: Solid

Lab Sample ID: 890-5296-3

09/22/23 15:00

Matrix: Solid

Client: Ensolum Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: FS04

Date Collected: 09/18/23 13:40 Date Received: 09/19/23 16:16

Sample Depth: 4.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/21/23 23:14	1
Diesel Range Organics (Over C10-C28)	59.4		50.5	mg/Kg		09/21/23 14:25	09/21/23 23:14	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/21/23 23:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130			09/21/23 14:25	09/21/23 23:14	1
o-Terphenyl	118		70 - 130			09/21/23 14:25	09/21/23 23:14	1
Method: EPA 300.0 - Anions,	lon Chromat	tography -	Soluble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

4.98 **Client Sample ID: FS05** Lab Sample ID: 890-5296-4

mg/Kg

212

%Recovery Qualifier

110

123

Date Collected: 09/18/23 13:45 Date Received: 09/19/23 16:16

Sample Depth: 8

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 19:31	1
Toluene	< 0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 19:31	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 19:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/21/23 14:25	09/24/23 19:31	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		09/21/23 14:25	09/24/23 19:31	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/21/23 14:25	09/24/23 19:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			09/21/23 14:25	09/24/23 19:31	1
1,4-Difluorobenzene (Surr)	105		70 - 130			09/21/23 14:25	09/24/23 19:31	1
Method: TAL SOP Total BTEX Analyte Total BTEY	Result	Qualifier	RL	Unit ma/Ka	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total BTEX	<0.00398	Qualifier U	RL 0.00398	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/24/23 19:31	Dil Fac
Analyte	Result <0.00398	Qualifier U	RL 0.00398		<u>D</u>	Prepared Prepared		Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Di	Result <0.00398	Qualifier U Organics (RL 0.00398 DRO) (GC)	mg/Kg	— -		09/24/23 19:31	1
Analyte Total BTEX Method: SW846 8015 NM - Di Analyte Total TPH	Result <0.00398 esel Range (Result 72.9	Qualifier U Organics (Qualifier	RL 0.00398 DRO) (GC) RL 49.8	mg/Kg	— -		09/24/23 19:31 Analyzed	1
Analyte Total BTEX Method: SW846 8015 NM - Di Analyte	Result <0.00398 esel Range (Result 72.9 Diesel Range	Qualifier U Organics (Qualifier	RL 0.00398 DRO) (GC) RL 49.8	mg/Kg	— -		09/24/23 19:31 Analyzed	1
Analyte Total BTEX Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I	Result <0.00398 esel Range (Result 72.9 Diesel Range	Qualifier U Organics (Qualifier Organics Qualifier Qualifier	RL 0.00398 DRO) (GC) RL 49.8	mg/Kg Unit mg/Kg	<u>-</u>	Prepared	09/24/23 19:31 Analyzed 09/21/23 23:36	Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics	Result <0.00398 esel Range (Result 72.9 Diesel Range Result	Qualifier U Organics (Qualifier Organics Qualifier Qualifier	RL 0.00398 DRO) (GC) RL 49.8	mg/Kg Unit mg/Kg Unit	<u>-</u>	Prepared Prepared	09/24/23 19:31 Analyzed 09/21/23 23:36 Analyzed 09/21/23 23:36	Dil Fac Dil Fac

Eurofins Carlsbad

Analyzed

Prepared

09/21/23 14:25 09/21/23 23:36

09/21/23 14:25 09/21/23 23:36

Limits

70 - 130

70 - 130

Dil Fac

Surrogate

o-Terphenyl

1-Chlorooctane

Client Sample ID: FS05 Lab Sample ID: 890-5296-4

Date Collected: 09/18/23 13:45 Matrix: Solid Date Received: 09/19/23 16:16

Sample Depth: 8

Method: EPA 300.0 - Anions, I	on Chromat	ography -	Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	556		4.96	mg/Kg			10/06/23 13:21	1

Client Sample ID: FS06 Lab Sample ID: 890-5296-5 Matrix: Solid

Date Collected: 09/18/23 13:50 Date Received: 09/19/23 16:16

Sample Depth: 8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 19:51	1
Toluene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 19:51	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 19:51	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		09/21/23 14:25	09/24/23 19:51	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 19:51	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		09/21/23 14:25	09/24/23 19:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			09/21/23 14:25	09/24/23 19:51	1
1,4-Difluorobenzene (Surr)	108		70 - 130			09/21/23 14:25	09/24/23 19:51	1

Method: TAL SOP Total BTEX -	- Total BTE	X Calculati	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			09/24/23 19:51	1

Method: SW846 8015 NM - Die	sel Range (Organics (I	ORO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	58.8		49.9	mg/Kg			09/21/23 23:57	1

Method: SW846 8015B NM - D	Diesel Range	Organics	(DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/21/23 14:25	09/21/23 23:57	1
Diesel Range Organics (Over C10-C28)	58.8		49.9	mg/Kg		09/21/23 14:25	09/21/23 23:57	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/21/23 14:25	09/21/23 23:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130			09/21/23 14:25	09/21/23 23:57	1
o-Terphenyl	110		70 - 130			09/21/23 14:25	09/21/23 23:57	1

Method: EPA 300.0 - Anions, Id	on Chromato	graphy -	Soluble					
Analyte	Result C	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	216		4.97	mg/Kg			09/22/23 15:13	1

Eurofins Carlsbad

10/9/2023 (Rev. 1)

Client Sample ID: FS07 Lab Sample ID: 890-5296-6

Date Collected: 09/18/23 13:55 Matrix: Solid Date Received: 09/19/23 16:16

Sample Depth: 5.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/21/23 14:25	09/24/23 20:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:11	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/21/23 14:25	09/24/23 20:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130			09/21/23 14:25	09/24/23 20:11	1
1,4-Difluorobenzene (Surr)	104		70 - 130			09/21/23 14:25	09/24/23 20:11	1
- Method: TAL SOP Total BTEX	(- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			09/24/23 20:11	1
Analyte Total TPH		Qualifier	RL 49.6	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	64.4		49.6	ma/Ka			00/00/00 00 40	
				mg/rtg			09/22/23 00:19	1
Mothod: CMO4C 004ED NM F	Discal Bona	Organiaa	(DBO) (CC)	mg/rtg			09/22/23 00:19	1
					Б	Droporod		
Method: SW846 8015B NM - DANIEL CONTROL OF C	Result	Qualifier	RL	Unit	<u>D</u>	Prepared 00/21/23 14:25	Analyzed	Dil Fac
Analyte Gasoline Range Organics		Qualifier			<u>D</u>	Prepared 09/21/23 14:25		Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier	RL	Unit	<u>D</u>	09/21/23 14:25	Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10	Result <49.6	Qualifier U	49.6	Unit mg/Kg	<u> </u>	09/21/23 14:25 09/21/23 14:25	Analyzed 09/22/23 00:19	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.6 64.4	Qualifier U	49.6 49.6	Unit mg/Kg mg/Kg	<u>D</u>	09/21/23 14:25 09/21/23 14:25	Analyzed 09/22/23 00:19 09/22/23 00:19	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.6 64.4 <49.6	Qualifier U	49.6 49.6 49.6	Unit mg/Kg mg/Kg	<u>D</u>	09/21/23 14:25 09/21/23 14:25 09/21/23 14:25 Prepared	Analyzed 09/22/23 00:19 09/22/23 00:19 09/22/23 00:19	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.6 64.4 <49.6 %Recovery	Qualifier U	49.6 49.6 49.6 <i>Limits</i>	Unit mg/Kg mg/Kg	<u> </u>	09/21/23 14:25 09/21/23 14:25 09/21/23 14:25 Prepared 09/21/23 14:25	Analyzed 09/22/23 00:19 09/22/23 00:19 09/22/23 00:19 Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <49.6 64.4 <49.6 %Recovery 100 107	Qualifier U Qualifier	RL 49.6 49.6 49.6 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	09/21/23 14:25 09/21/23 14:25 09/21/23 14:25 Prepared 09/21/23 14:25	Analyzed 09/22/23 00:19 09/22/23 00:19 09/22/23 00:19 Analyzed 09/22/23 00:19	Dil Fac
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 <49.6 64.4 <49.6	Qualifier U Qualifier	RL 49.6 49.6 49.6 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	09/21/23 14:25 09/21/23 14:25 09/21/23 14:25 Prepared 09/21/23 14:25	Analyzed 09/22/23 00:19 09/22/23 00:19 09/22/23 00:19 Analyzed 09/22/23 00:19	Dil Fac 1 Dil Fac 1 Dil Fac 1 Dil Fac

Client Sample ID: FS08 Lab Sample ID: 890-5296-7 Date Collected: 09/18/23 14:00 **Matrix: Solid**

Date Received: 09/19/23 16:16

Sample Depth: 6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 20:32	1
Toluene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 20:32	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 20:32	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		09/21/23 14:25	09/24/23 20:32	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		09/21/23 14:25	09/24/23 20:32	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		09/21/23 14:25	09/24/23 20:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			09/21/23 14:25	09/24/23 20:32	1

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: FS08 Lab Sa
Date Collected: 09/18/23 14:00

Lab Sample ID: 890-5296-7 Matrix: Solid

Date Received: 09/19/23 16:16

Sample Depth: 6

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

Surrogate	%Recovery	Qualifier Li	imits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	107	70	<u>0 - 130</u>	09/21/23 14:25	09/24/23 20:32	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			09/24/23 20:32	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2 U	50.2	mg/Kg			09/22/23 00:40	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

		. 9 (=) (= .	-,				
Analyte	Result Qu	ualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2 U	50.2	mg/Kg		09/21/23 14:25	09/22/23 00:40	1
Diesel Range Organics (Over C10-C28)	<50.2 U	50.2	mg/Kg		09/21/23 14:25	09/22/23 00:40	1
Oll Range Organics (Over C28-C36)	<50.2 U	50.2	mg/Kg		09/21/23 14:25	09/22/23 00:40	1
Surrogate	%Recovery Or	ualifior l'imite			Propared	Analyzod	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	09/21/23 14:25	09/22/23 00:40	1
o-Terphenyl	105		70 - 130	09/21/23 14:25	09/22/23 00:40	1

Ar	nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cł	nloride	186		5.04	mg/Kg			09/22/23 15:26	1

Client Sample ID: FS09

Date Collected: 09/18/23 14:05

Lab Sample ID: 890-5296-8

Matrix: Solid

Date Collected: 09/18/23 14:05 Date Received: 09/19/23 16:16

Sample Depth: 6.5

Mothod: CIMOAC 9024D	Volatila Organia Compounde (C)	\sim

	rolatile el gallie	- opou	uo (o o)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/21/23 14:25	09/24/23 20:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 20:53	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/21/23 14:25	09/24/23 20:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			09/21/23 14:25	09/24/23 20:53	1
1,4-Difluorobenzene (Surr)	108		70 - 130			09/21/23 14:25	09/24/23 20:53	1

Mothod: TAI	SOP Total RTFY	 Total BTFX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/24/23 20:53	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	52.8	50.5	mg/Kg			09/22/23 01:23	1

Eurofins Carlsbad

2

3

4

ວ

7

9

10

1 1

Matrix: Solid

Lab Sample ID: 890-5296-8

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: FS09

Date Collected: 09/18/23 14:05 Date Received: 09/19/23 16:16

Sample Depth: 6.5

Method: SW846 8015B NM - I	Diesel Range	Organics	(DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/22/23 01:23	1
Diesel Range Organics (Over C10-C28)	52.8		50.5	mg/Kg		09/21/23 14:25	09/22/23 01:23	1
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/22/23 01:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130			09/21/23 14:25	09/22/23 01:23	1
o-Terphenyl	126		70 - 130			09/21/23 14:25	09/22/23 01:23	1
Method: EPA 300.0 - Anions,	Ion Chroma	tography -	Soluble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	245		5.00	mg/Kg			09/22/23 15:33	1

Lab Sample ID: 890-5296-9 **Client Sample ID: FS10** Date Collected: 09/18/23 14:10 **Matrix: Solid**

Date Received: 09/19/23 16:16

Sample Depth: 7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:13	1
Toluene	< 0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:13	1
Ethylbenzene	< 0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:13	1
m-Xylene & p-Xylene	< 0.00402	U	0.00402	mg/Kg		09/21/23 14:25	09/24/23 21:13	1
o-Xylene	< 0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:13	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/21/23 14:25	09/24/23 21:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130			09/21/23 14:25	09/24/23 21:13	1
1,4-Difluorobenzene (Surr)	107		70 - 130			09/21/23 14:25	09/24/23 21:13	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/24/23 21:13	1
Method: SW846 8015 NM - Die	esel Range (Organics (DRO) (GC)					
Method: SW846 8015 NM - Die Analyte		Organics (Qualifier	DRO) (GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
		Qualifier		Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/22/23 01:45	Dil Fac
Analyte Total TPH	Result <50.3	Qualifier U	RL 50.3		<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - D	Result <50.3	Qualifier U	RL 50.3		<u>D</u>	Prepared Prepared		1
Analyte Total TPH Method: SW846 8015B NM - D	Result <50.3	Qualifier U Organics Qualifier	RL 50.3 (DRO) (GC)	mg/Kg		<u> </u>	09/22/23 01:45	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - D Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.3	Qualifier U Organics Qualifier U	RL 50.3 (DRO) (GC) RL	mg/Kg Unit		Prepared	09/22/23 01:45 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - D Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.3 Diesel Range Result <50.3	Qualifier U Organics Qualifier U	RL 50.3 (DRO) (GC) RL 50.3	mg/Kg Unit mg/Kg		Prepared 09/21/23 14:25	09/22/23 01:45 Analyzed 09/22/23 01:45 09/22/23 01:45	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - D Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.3 Diesel Range Result <50.3 <50.3	Qualifier U Organics Qualifier U U	RL 50.3 (DRO) (GC) RL 50.3 50.3	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25	09/22/23 01:45 Analyzed 09/22/23 01:45 09/22/23 01:45	1 Dil Fac 1 1
Analyte Total TPH Method: SW846 8015B NM - D Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.3 Diesel Range Result <50.3 <50.3	Qualifier U Organics Qualifier U U	RL 50.3 (DRO) (GC) RL 50.3 50.3	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25	09/22/23 01:45 Analyzed 09/22/23 01:45 09/22/23 01:45 09/22/23 01:45	1 Dil Fac 1

Client Sample Results

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: FS10 Lab Sample ID: 890-5296-9

Date Collected: 09/18/23 14:10 Matrix: Solid Date Received: 09/19/23 16:16

Sample Depth: 7

Method: EPA 300.0 - Anions, le	on Chromat	ography -	Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	328		4.99	mg/Kg			09/22/23 15:40	1

Client Sample ID: SW01 Lab Sample ID: 890-5296-10 **Matrix: Solid**

Date Collected: 09/18/23 14:15 Date Received: 09/19/23 16:16

Sample Depth: 0 - -4.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:33	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:33	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:33	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/21/23 14:25	09/24/23 21:33	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/21/23 14:25	09/24/23 21:33	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/21/23 14:25	09/24/23 21:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			09/21/23 14:25	09/24/23 21:33	1
1,4-Difluorobenzene (Surr)	108		70 - 130			09/21/23 14:25	09/24/23 21:33	1

Method: TAL SUP Total BTEX	- IOIAI DIE	A Calculat	lion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/24/23 21:33	1
_								

Method: SW846 8015 NM - Diese	l Range (Organics (D	RO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			09/22/23 02:06	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/21/23 14:25	09/22/23 02:06	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/21/23 14:25	09/22/23 02:06	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/21/23 14:25	09/22/23 02:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	148	S1+	70 - 130			09/21/23 14:25	09/22/23 02:06	1
o-Terphenyl	165	S1+	70 - 130			09/21/23 14:25	09/22/23 02:06	1

Method: EPA 300.0 - Anions, Ion	Chromat	tography - S	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	207		4.97	mg/Kg			09/22/23 22:28	1

Matrix: Solid

Lab Sample ID: 890-5296-11

09/21/23 14:25 09/22/23 02:27

Client Sample Results

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: SW02

Date Collected: 09/18/23 14:20 Date Received: 09/19/23 16:16

Sample Depth: 0 - -4.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 17:15	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 17:15	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 17:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/25/23 08:39	09/25/23 17:15	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 17:15	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/25/23 08:39	09/25/23 17:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			09/25/23 08:39	09/25/23 17:15	1
1,4-Difluorobenzene (Surr)	71		70 - 130			09/25/23 08:39	09/25/23 17:15	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg	 -		09/25/23 17:15	1
			(550) (66)					

Method: 544846 8015 NW - Die:	sei Range C	rganics (DRU) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			09/22/23 02:27	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		09/21/23 14:25	09/22/23 02:27	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		09/21/23 14:25	09/22/23 02:27	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		09/21/23 14:25	09/22/23 02:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	133	S1+	70 - 130			09/21/23 14:25	09/22/23 02:27	

Method: EPA 300.0 - A	nions, Ion Chromatography - S	Soluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	102	5.00	mg/Kg			09/22/23 22:48	

70 - 130

134 S1+

Client Sample ID: SW03 Lab Sample ID: 890-5296-12

Date Collected: 09/18/23 14:25 Date Received: 09/19/23 16:16

Sample Depth: 0 - -8

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/25/23 08:39	09/25/23 17:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/25/23 08:39	09/25/23 17:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/25/23 08:39	09/25/23 17:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/25/23 08:39	09/25/23 17:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/25/23 08:39	09/25/23 17:35	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/25/23 08:39	09/25/23 17:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			09/25/23 08:39	09/25/23 17:35	1

Eurofins Carlsbad

Matrix: Solid

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: SW03 Lab Sample ID: 890-5296-12

Date Collected: 09/18/23 14:25

Date Received: 09/19/23 16:16

Matrix: Solid

Sample Depth: 0 - -8

Surrogate	%Recovery Qualit	fier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	82	70 - 130	09/25/23 08:39	09/25/23 17:35	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/25/23 17:35	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	55.0	49.5	mg/Kg			09/22/23 02:48	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5	mg/Kg		09/21/23 14:25	09/22/23 02:48	1
Diesel Range Organics (Over C10-C28)	55.0		49.5	mg/Kg		09/21/23 14:25	09/22/23 02:48	1
Oll Range Organics (Over C28-C36)	<49.5	U	49.5	mg/Kg		09/21/23 14:25	09/22/23 02:48	1
Surrogato	% Pacayory	Qualifier	Limite			Droporod	Analyzad	Dil Ess

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	139	S1+	70 - 130	09/21/23 14:25	09/22/23 02:48	1
o-Terphenyl	155	S1+	70 - 130	09/21/23 14:25	09/22/23 02:48	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	327	5.00	mg/Kg			09/22/23 22:55	1

Client Sample ID: SW04

Date Collected: 09/18/23 14:30

Lab Sample ID: 890-5296-13

Matrix: Solid

Date Collected: 09/18/23 14:30 Date Received: 09/19/23 16:16

Sample Depth: 0 - -5.5

Method: SW846 8021B -	Volatile Organic	Compounds (GC)
INICITION. SYVOTO OUZ ID :	Voiatile Organic	

Welliou. 344040 002 ID - V	name Organic	Compoun	us (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 17:56	1
Toluene	< 0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 17:56	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 17:56	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/25/23 08:39	09/25/23 17:56	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 17:56	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/25/23 08:39	09/25/23 17:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			09/25/23 08:39	09/25/23 17:56	1
1.4-Difluorobenzene (Surr)	70		70 - 130			09/25/23 08:39	09/25/23 17:56	1

Method: TAL SOP Total RTFX - Total RTFX Ca	doulation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/25/23 17:56	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	57.2	49.6	mg/Kg			09/29/23 16:25	1

Eurofins Carlsbad

5

3

4

_

7

9

10

12

13

Matrix: Solid

Lab Sample ID: 890-5296-13

09/22/23 23:01

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: SW04

199

Date Collected: 09/18/23 14:30 Date Received: 09/19/23 16:16

Sample Depth: 0 - -5.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		09/28/23 14:02	09/29/23 16:25	1
Diesel Range Organics (Over C10-C28)	57.2		49.6	mg/Kg		09/28/23 14:02	09/29/23 16:25	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		09/28/23 14:02	09/29/23 16:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	72		70 - 130			09/28/23 14:02	09/29/23 16:25	1
o-Terphenyl	80		70 - 130			09/28/23 14:02	09/29/23 16:25	1
Method: EPA 300.0 - Anions,	lon Chroma	tography -	Soluble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: SW05

Date Collected: 09/18/23 14:35

Lab Sample ID: 890-5296-14

Matrix: Solid

5.01

mg/Kg

Date Received: 09/19/23 16:16

Sample Depth: 0 - -5.5

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 18:16	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 18:16	1
Ethylbenzene	< 0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 18:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/25/23 08:39	09/25/23 18:16	1
o-Xylene	< 0.00201	U	0.00201	mg/Kg		09/25/23 08:39	09/25/23 18:16	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/25/23 08:39	09/25/23 18:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130			09/25/23 08:39	09/25/23 18:16	1
1,4-Difluorobenzene (Surr)	91		70 - 130			09/25/23 08:39	09/25/23 18:16	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/25/23 18:16	1
- Method: SW846 8015 NM - Die	esel Range	Organics (DRO) (GC)					
Analyte	_	Qualifier	, RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	51.4		50.5	mg/Kg			09/22/23 03:30	1
- Method: SW846 8015B NM - D	iesel Range	organics	(DRO) (GC)					
Analyte	_	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/22/23 03:30	1
Discoul Bases of Control (Control	51.4		50.5	mg/Kg		09/21/23 14:25	09/22/23 03:30	1
	01.4							
C10-C28)	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/22/23 03:30	1
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate			50.5 <i>Limit</i> s	mg/Kg		09/21/23 14:25 Prepared	09/22/23 03:30 Analyzed	1 Dil Fac
C10-C28) Oll Range Organics (Over C28-C36)	<50.5			mg/Kg				

Eurofins Carlsbad

1

_

3

5

7

a

4 4

12

13

Job ID: 890-5296-1

Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: SW05 Lab Sample ID: 890-5296-14 Date Collected: 09/18/23 14:35 Matrix: Solid Date Received: 09/19/23 16:16

Sample Depth: 0 - -5.5

Client: Ensolum

N	lethod: EPA 300.0 - Anions, Id	on Chromat	ography -	Soluble					
Α	nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
С	hloride	106		4.99	mg/Kg			09/22/23 23:08	1

Client Sample ID: SW06 Lab Sample ID: 890-5296-15 **Matrix: Solid**

Date Collected: 09/18/23 14:40 Date Received: 09/19/23 16:16

Sample Depth: 0 - -6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:37	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/25/23 08:39	09/25/23 18:37	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/25/23 08:39	09/25/23 18:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130			09/25/23 08:39	09/25/23 18:37	1
1,4-Difluorobenzene (Surr)	89		70 - 130			09/25/23 08:39	09/25/23 18:37	1

Method: TAL SOP Total BTEX -	- Total BTE	X Calculati	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/25/23 18:37	1

Method: SW846 8015 NM - Die	sel Range (Organics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5	mg/Kg			09/22/23 03:51	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/22/23 03:51	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/22/23 03:51	1
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		09/21/23 14:25	09/22/23 03:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			09/21/23 14:25	09/22/23 03:51	1
o-Terphenyl	111		70 - 130			09/21/23 14:25	09/22/23 03:51	1

Method: EPA 300.0 - Anions, Id	on Chromatography -	Soluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.8	5.03	mg/Kg			09/22/23 23:15	1

Client Sample ID: SW07 Lab Sample ID: 890-5296-16

Date Collected: 09/18/23 14:45 **Matrix: Solid** Date Received: 09/19/23 16:16

Sample Depth: 0 - -6.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:57	1
Toluene	< 0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:57	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/25/23 08:39	09/25/23 18:57	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		09/25/23 08:39	09/25/23 18:57	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/25/23 08:39	09/25/23 18:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			09/25/23 08:39	09/25/23 18:57	1
1,4-Difluorobenzene (Surr)	65	S1-	70 - 130			09/25/23 08:39	09/25/23 18:57	1
- Method: TAL SOP Total BTEX	(- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/25/23 18:57	1
Analyte Total TPH		Qualifier	DRO) (GC) RL 50.2	Unit	<u>D</u>	Prepared	Analyzed	
·	Result 60.3			Mg/Kg	<u>D</u>	Prepared	Analyzed 09/22/23 04:12	
Total TPH	60.3	Qualifier	RL 50.2		<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - E Analyte	60.3 Diesel Range Result	Qualifier Organics Qualifier	RL 50.2		<u>D</u>	Prepared Prepared		1
Total TPH Method: SW846 8015B NM - E	60.3 Diesel Range	Qualifier Organics Qualifier	RL 50.2 (DRO) (GC)	mg/Kg		<u> </u>	09/22/23 04:12	1 Dil Fac
Total TPH Method: SW846 8015B NM - DANALYTE Gasoline Range Organics	60.3 Diesel Range Result	Qualifier Organics Qualifier	RL 50.2 (DRO) (GC) RL	mg/Kg Unit		Prepared 09/21/23 14:25	09/22/23 04:12 Analyzed	Dil Fac
Total TPH Method: SW846 8015B NM - DANAINTE Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	60.3 Diesel Range Result <50.2	Qualifier Organics Qualifier U	RL 50.2 (DRO) (GC) RL 50.2	mg/Kg Unit mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25	09/22/23 04:12 Analyzed 09/22/23 04:12	Dil Fac
Total TPH Method: SW846 8015B NM - DANIEL CONTROL CON	60.3 Diesel Range Result <50.2 60.3	Qualifier Organics Qualifier U	RL 50.2 (DRO) (GC) RL 50.2 50.2	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25	09/22/23 04:12 Analyzed 09/22/23 04:12 09/22/23 04:12	1 Dil Fac
Method: SW846 8015B NM - DANIEL CANALOGY CANALOG	60.3 Diesel Range Result <50.2 60.3 <50.2	Qualifier Organics Qualifier U	RL 50.2 (DRO) (GC) RL 50.2 50.2 50.2	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25	09/22/23 04:12 Analyzed 09/22/23 04:12 09/22/23 04:12 09/22/23 04:12	Dil Fac
Method: SW846 8015B NM - DANAILYTE Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	60.3 Diesel Range Result <50.2 60.3 <50.2 %Recovery	Qualifier Organics Qualifier U	RL 50.2 (DRO) (GC) RL 50.2 50.2 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25 09/21/23 14:25 Prepared 09/21/23 14:25	09/22/23 04:12 Analyzed 09/22/23 04:12 09/22/23 04:12 09/22/23 04:12 Analyzed	Dil Fac
Method: SW846 8015B NM - EANalyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	60.3 Diesel Range Result <50.2 60.3 <50.2 %Recovery 106 114	Qualifier Organics Qualifier U Qualifier	RL 50.2 (DRO) (GC) RL 50.2 50.2 50.2 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25 09/21/23 14:25 Prepared 09/21/23 14:25	Analyzed 09/22/23 04:12 09/22/23 04:12 09/22/23 04:12 Analyzed 09/22/23 04:12	Dil Face 1 1 1 Dil Face 1
Total TPH Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	60.3 Diesel Range Result <50.2 60.3 <50.2 %Recovery 106 114 Ion Chromat	Qualifier Organics Qualifier U Qualifier	RL 50.2 (DRO) (GC) RL 50.2 50.2 50.2 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 09/21/23 14:25 09/21/23 14:25 09/21/23 14:25 Prepared 09/21/23 14:25	Analyzed 09/22/23 04:12 09/22/23 04:12 09/22/23 04:12 Analyzed 09/22/23 04:12	Dil Fac 1 Dil Fac 1 1 Dil Fac 1 Dil Fac Dil Fac

Client Sample ID: SW08 Lab Sample ID: 890-5296-17 Date Collected: 09/18/23 14:50 **Matrix: Solid**

Date Received: 09/19/23 16:16

Sample Depth: 0 - -7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/26/23 08:13	09/26/23 13:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/26/23 08:13	09/26/23 13:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/26/23 08:13	09/26/23 13:20	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		09/26/23 08:13	09/26/23 13:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/26/23 08:13	09/26/23 13:20	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/26/23 08:13	09/26/23 13:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130			09/26/23 08:13	09/26/23 13:20	1

Client Sample Results

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: SW08 Lab Sample ID: 890-5296-17

Date Collected: 09/18/23 14:50

Date Received: 09/19/23 16:16

Matrix: Solid

Sample Depth: 0 - -7

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	75		70 - 130			09/26/23 08:13	09/26/23 13:20	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/26/23 13:20	1
Method: SW846 8015 NM - Die	esel Range (Organics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	71.8		49.8	mg/Kg			09/22/23 04:33	1
Analyte	Result	Qualifier	RL	Unit	_ <u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - D	Diesel Range	Organics	(DRO) (GC)					
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/21/23 14:25	09/22/23 04:33	1
Diesel Range Organics (Over	71.8		49.8	mg/Kg		00/21/23 14:25	09/22/23 04:33	1
C10-C28)	71.0		40.0	mg/rtg		03/21/23 14.23	03/22/23 04.33	
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/21/23 14:25	09/22/23 04:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
	114		70 - 130			09/21/23 14:25	09/22/23 04:33	1
1-Chlorooctane								

4.97

mg/Kg

103

09/22/23 23:28

Surrogate Summary

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	ent Surrogate Recovery (Acceptance Limits
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
380-33481-A-1-B MS	Matrix Spike	113	114	
80-33481-A-1-C MSD	Matrix Spike Duplicate	118	114	
90-5296-1	FS02	78	100	
90-5296-1 MS	FS02	101	113	
90-5296-1 MSD	FS02	99	97	
90-5296-2	FS03	99	101	
90-5296-3	FS04	85	110	
90-5296-4	FS05	94	105	
90-5296-5	FS06	93	108	
90-5296-6	FS07	91	104	
90-5296-7	FS08	93	107	
90-5296-8	FS09	97	108	
90-5296-9	FS10	92	107	
90-5296-10	SW01	93	108	
0-5296-11	SW02	93	71	
90-5296-12	SW03	93	82	
0-5296-13	SW04	93	70	
0-5296-14	SW05	85	91	
00-5296-15	SW06	85	89	
0-5296-16	SW07	94	65 S1-	
0-5296-17	SW08	92	75	
0-5322-A-1-A MS	Matrix Spike	115	85	
90-5322-A-1-B MSD	Matrix Spike Duplicate	113	102	
CS 880-62998/1-A	Lab Control Sample	95	91	
CS 880-63021/1-A	Lab Control Sample	109	121	
CS 880-63187/1-A	Lab Control Sample	112	100	
CSD 880-62998/2-A	Lab Control Sample Dup	88	103	
CSD 880-63021/2-A	Lab Control Sample Dup	107	112	
CSD 880-63187/2-A	Lab Control Sample Dup	109	99	
B 880-62998/5-A	Method Blank	121	152 S1+	
IB 880-63021/5-A	Method Blank	73	94	
1B 880-63187/5-A	Method Blank	73	94	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

=			Per
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-33478-A-1-D MS	Matrix Spike	120	120
880-33478-A-1-E MSD	Matrix Spike Duplicate	109	104
880-33751-A-21-E MS	Matrix Spike	64 S1-	60 S1-
880-33751-A-21-F MSD	Matrix Spike Duplicate	64 S1-	60 S1-
890-5296-1	FS02	100	108
890-5296-2	FS03	97	106
890-5296-3	FS04	108	118

Eurofins Carlsbad

2

5

8

10

12

Surrogate Summary

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

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

Matrix: Solid Prep Type: Total/NA

				nt Surrogate Recovery (Acceptance Limits)
		1001	ОТРН1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5296-4	FS05	110	123	
890-5296-5	FS06	104	110	
890-5296-6	FS07	100	107	
890-5296-7	FS08	102	105	
890-5296-8	FS09	113	126	
890-5296-9	FS10	143 S1+	160 S1+	
890-5296-10	SW01	148 S1+	165 S1+	
890-5296-11	SW02	133 S1+	134 S1+	
890-5296-12	SW03	139 S1+	155 S1+	
890-5296-13	SW04	72	80	
890-5296-14	SW05	111	122	
890-5296-15	SW06	105	111	
890-5296-16	SW07	106	114	
890-5296-17	SW08	114	126	
LCS 880-62999/2-A	Lab Control Sample	85	96	
LCS 880-63538/2-A	Lab Control Sample	104	112	
LCSD 880-62999/3-A	Lab Control Sample Dup	82	94	
LCSD 880-63538/3-A	Lab Control Sample Dup	96	102	
MB 880-62999/1-A	Method Blank	170 S1+	198 S1+	
MB 880-63538/1-A	Method Blank	97	118	

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62998/5-A

Matrix: Solid

Analysis Batch: 63152

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62998

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 18:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 18:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 18:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/21/23 14:25	09/24/23 18:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/21/23 14:25	09/24/23 18:00	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		09/21/23 14:25	09/24/23 18:00	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130	09/21/23 14:25	09/24/23 18:00	1
1,4-Difluorobenzene (Surr)	152	S1+	70 - 130	09/21/23 14:25	09/24/23 18:00	1

Lab Sample ID: LCS 880-62998/1-A

Matrix: Solid

Analysis Batch: 63152

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

Prep Batch: 62998

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08428		mg/Kg		84	70 - 130	
Toluene	0.100	0.09334		mg/Kg		93	70 - 130	
Ethylbenzene	0.100	0.08708		mg/Kg		87	70 - 130	
m-Xylene & p-Xylene	0.200	0.1893		mg/Kg		95	70 - 130	
o-Xylene	0.100	0.09135		mg/Kg		91	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	95	70 - 130
1,4-Difluorobenzene (Surr)	91	70 - 130

Lab Sample ID: LCSD 880-62998/2-A

Matrix: Solid

Analysis Batch: 63152

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

Prep Batch: 62998

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09787		mg/Kg		98	70 - 130	15	35
Toluene	0.100	0.08582		mg/Kg		86	70 - 130	8	35
Ethylbenzene	0.100	0.07781		mg/Kg		78	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.1615		mg/Kg		81	70 - 130	16	35
o-Xylene	0.100	0.08327		mg/Kg		83	70 - 130	9	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1.4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-5296-1 MS

Matrix: Solid

Analysis Batch: 63152

Client Sample ID: FS02 Prep Type: Total/NA

Prep Batch: 62998

										 7
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U	0.0990	0.1022		mg/Kg		103	70 - 130	
Toluene	<0.00199	U	0.0990	0.07929		mg/Kg		80	70 - 130	

Eurofins Carlsbad

Page 23 of 51

QC Sample Results

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

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

Lab Sample ID: 890-5296-1 MS **Matrix: Solid**

Analysis Batch: 63152

Client Sample ID: FS02 Prep Type: Total/NA

Prep Batch: 62998

ts
130
130
130
1

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	113		70 - 130

Client Sample ID: FS02

Prep Type: Total/NA Prep Batch: 62998

Matrix: Solid Analysis Batch: 63152

Lab Sample ID: 890-5296-1 MSD

Allaly 313 Batolli 00 102									I ICP L	outon. v	
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.100	0.09342		mg/Kg		93	70 - 130	9	35
Toluene	< 0.00199	U	0.100	0.08279		mg/Kg		83	70 - 130	4	35
Ethylbenzene	<0.00199	U	0.100	0.07973		mg/Kg		80	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1825		mg/Kg		91	70 - 130	3	35
o-Xylene	< 0.00199	U	0.100	0.09028		mg/Kg		90	70 - 130	3	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: MB 880-63021/5-A

Matrix: Solid

Analysis Batch: 63283

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

Prep Batch: 63021

	1410	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/21/23 17:03	09/26/23 11:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/21/23 17:03	09/26/23 11:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/21/23 17:03	09/26/23 11:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/21/23 17:03	09/26/23 11:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/21/23 17:03	09/26/23 11:27	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/21/23 17:03	09/26/23 11:27	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared Anal	lyzed Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130	09/21/23 17:03 09/26/2	23 11:27 1
1,4-Difluorobenzene (Surr)	94		70 - 130	09/21/23 17:03 09/26/2	?3 11:27 1

Lab Sample ID: LCS 880-63021/1-A

Matrix: Solid

Analysis Batch: 63283

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

Prep Batch: 63021

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09513		mg/Kg		95	70 - 130	
Toluene	0.100	0.1016		mg/Kg		102	70 - 130	
Ethylbenzene	0.100	0.1029		mg/Kg		103	70 - 130	
m-Xylene & p-Xylene	0.200	0.2159		mg/Kg		108	70 - 130	

QC Sample Results

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

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

Lab Sample ID: LCS 880-63021/1-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 63283** Prep Batch: 63021 LCS LCS %Rec Spike

Analyte Added Result Qualifier Unit %Rec Limits o-Xylene 0 100 0 1049 mg/Kg 105 70 - 130

LCS LCS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 109 70 - 130 1,4-Difluorobenzene (Surr) 70 - 130 121

Lab Sample ID: LCSD 880-63021/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 63283

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier %Rec Limits **RPD** Limit **Analyte** Unit D Benzene 0.100 0.09430 mg/Kg 94 70 - 130 35 Toluene 0.100 0.09809 mg/Kg 98 70 - 130 35 Ethylbenzene 0.100 0.09792 mg/Kg 98 70 - 130 5 35 0.2068 103 70 - 130 35 m-Xylene & p-Xylene 0.200 mg/Kg 70 - 130 o-Xylene 0.100 0.1005 mg/Kg 101 35

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

Lab Sample ID: 880-33481-A-1-B MS **Client Sample ID: Matrix Spike Matrix: Solid**

Analysis Batch: 63283

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier %Rec Analyte Unit D Limits F1 0.07601 F1 Benzene 0.0196 0.0998 mg/Kg 57 70 - 130 Toluene 0.605 E 0.0998 0.08313 4 mg/Kg -523 70 - 130 0.0307 F1 Ethylbenzene 0.0998 0.08771 F1 mg/Kg 57 70 - 130m-Xylene & p-Xylene 0.0880 F1 0.200 0.1789 F1 mg/Kg 46 70 - 130 70 - 130 o-Xylene 0.0394 F1 0.0998 0.08847 F1 mg/Kg 49

MS MS %Recovery Surrogate Qualifier Limits 70 - 130 4-Bromofluorobenzene (Surr) 113 1,4-Difluorobenzene (Surr) 70 - 130 114

Lab Sample ID: 880-33481-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Analysis Batch: 63283 Prep Batch: 63021 Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier %Rec Limits RPD Limit **Analyte** Unit 0.0196 F1 0.08338 F1 Benzene 0.0990 mg/Kg 64 70 - 130 9 35 Toluene 0.605 E 0.0990 0.09076 4 -519 70 - 130 35 mg/Kg 9 Ethylbenzene 0.0307 F1 0.0990 0.09700 F1 mg/Kg 67 70 - 130 10 35 m-Xylene & p-Xylene 0.0880 F1 0.198 0.1980 F1 mg/Kg 56 70 - 130 10 35 0.0394 F1 0.09753 F1 o-Xylene 0.0990 mg/Kg 59 70 - 130 10 35

Eurofins Carlsbad

Prep Batch: 63021

Prep Type: Total/NA

Prep Batch: 63021

Prep Type: Total/NA

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

Lab Sample ID: 880-33481-A-1-C MSD

Matrix: Solid

Analysis Batch: 63283

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 63021

MSD MSD %Recovery Qualifier Surrogate Limits 4-Bromofluorobenzene (Surr) 118 70 - 130 1,4-Difluorobenzene (Surr) 114 70 - 130

Lab Sample ID: MB 880-63187/5-A

Matrix: Solid

Analysis Batch: 63183

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

Prep Batch: 63187

мв мв Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 09/25/23 08:39 09/25/23 11:24 Toluene <0.00200 U 0.00200 mg/Kg 09/25/23 08:39 09/25/23 11:24 09/25/23 08:39 09/25/23 11:24 Ethylbenzene <0.00200 U 0.00200 mg/Kg m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 09/25/23 08:39 09/25/23 11:24 o-Xylene <0.00200 U 0.00200 mg/Kg 09/25/23 08:39 09/25/23 11:24 Xylenes, Total <0.00400 U 0.00400 mg/Kg 09/25/23 08:39 09/25/23 11:24

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130	09/25/23 08:39	09/25/23 11:24	1
1,4-Difluorobenzene (Surr)	94		70 - 130	09/25/23 08:39	09/25/23 11:24	1

Lab Sample ID: LCS 880-63187/1-A

Matrix: Solid

Analysis Batch: 63183

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 63187

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09824		mg/Kg		98	70 - 130	
Toluene	0.100	0.1035		mg/Kg		104	70 - 130	
Ethylbenzene	0.100	0.1031		mg/Kg		103	70 - 130	
m-Xylene & p-Xylene	0.200	0.2213		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1090		mg/Kg		109	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-63187/2-A

Matrix: Solid

Analysis Batch: 63183

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 63187

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09053		mg/Kg		91	70 - 130	8	35
Toluene	0.100	0.09587		mg/Kg		96	70 - 130	8	35
Ethylbenzene	0.100	0.09682		mg/Kg		97	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2050		mg/Kg		103	70 - 130	8	35
o-Xylene	0.100	0.1012		mg/Kg		101	70 - 130	7	35

LCSD LCSD

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 109 70 - 130

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

Lab Sample ID: LCSD 880-63187/2-A

Matrix: Solid

Analysis Batch: 63183

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 63187

LCSD LCSD

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

Lab Sample ID: 890-5322-A-1-A MS **Client Sample ID: Matrix Spike**

Matrix: Solid

Analysis Batch: 63183

Prep Type: Total/NA

Prep Batch: 63187

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0998	0.08472		mg/Kg		85	70 - 130	
Toluene	<0.00200	U	0.0998	0.09480		mg/Kg		95	70 - 130	
Ethylbenzene	<0.00200	U	0.0998	0.09506		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2009		mg/Kg		101	70 - 130	
o-Xylene	<0.00200	U	0.0998	0.09958		mg/Kg		100	70 - 130	

MS MS

Surrogate	%Recovery Q	Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1.4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: 890-5322-A-1-B MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 63183

Prep Type: Total/NA

Prep Batch: 63187

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0990	0.08138		mg/Kg		82	70 - 130	4	35
Toluene	<0.00200	U	0.0990	0.09016		mg/Kg		91	70 - 130	5	35
Ethylbenzene	<0.00200	U	0.0990	0.09062		mg/Kg		92	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1926		mg/Kg		97	70 - 130	4	35
o-Xylene	<0.00200	U	0.0990	0.09519		mg/Kg		96	70 - 130	4	35

MSD MSD

Surrogate	%Recovery Qua	alitier Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

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

Lab Sample ID: MB 880-62999/1-A

Released to Imaging: 3/11/2024 11:17:01 AM

Matrix: Solid

Analysis Batch: 62961

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

Prep Batch: 62999

ı		1410	111.0						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/21/23 14:25	09/21/23 19:43	1
	Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/21/23 14:25	09/21/23 19:43	1
	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/21/23 14:25	09/21/23 19:43	1

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	170	S1+	70 - 130	09/21/23 14:25	09/21/23 19:43	1
o-Terphenyl	198	S1+	70 - 130	09/21/23 14:25	09/21/23 19:43	1

QC Sample Results

Client: Ensolum Job ID: 890-5296-1 SDG: 03C1558090 Project/Site: JRU 108H

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

Lab Sample ID: LCS 880-62999/2-A

Matrix: Solid

Analysis Batch: 62961

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 62999 %Rec

Spike LCS LCS Added Result Qualifier D %Rec Limits Analyte Unit Gasoline Range Organics 1000 884.8 mg/Kg 88 70 - 130 (GRO)-C6-C10 1000 Diesel Range Organics (Over 866.0 87 mg/Kg 70 - 130

C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	96		70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 62999

Analysis Batch: 62961 LCSD LCSD Spike %Rec **RPD** Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Gasoline Range Organics 1000 880.5 88 70 - 130 0 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 835.3 mg/Kg 84 70 - 130 4 20

C10-C28)

Matrix: Solid

LCSD LCSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 82 70 - 130 o-Terphenyl 94 70 - 130

Lab Sample ID: 880-33478-A-1-D MS

Lab Sample ID: LCSD 880-62999/3-A

Matrix: Solid

Analysis Batch: 62961

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 62999

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.6	U F2	997	1282		mg/Kg		126	70 - 130	
Diesel Range Organics (Over	75.9		997	1142		mg/Kg		107	70 - 130	

MS MS

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

Lab Sample ID: 880-33478-A-1-E MSD

Matrix: Solid

Analysis Batch: 62961

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 62999

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec <49.6 U F2 997 868.4 F2 Gasoline Range Organics mg/Kg 84 70 - 130 38 20 (GRO)-C6-C10 75.9 997 9903 mg/Kg 92 70 - 130 20 Diesel Range Organics (Over 14

C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 109

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

Lab Sample ID: 880-33478-A-1-E MSD

Matrix: Solid

Analysis Batch: 62961

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 62999

MSD MSD

%Recovery Qualifier Surrogate Limits 70 - 130 o-Terphenyl 104

Lab Sample ID: MB 880-63538/1-A

Matrix: Solid

Analysis Batch: 63575

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 63538

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		09/28/23 14:02	09/29/23 07:54	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/28/23 14:02	09/29/23 07:54	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/28/23 14:02	09/29/23 07:54	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	09/28/23 14:02	09/29/23 07:54	1
o-Terphenyl	118		70 - 130	09/28/23 14:02	09/29/23 07:54	1

Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 63575

Lab Sample ID: LCS 880-63538/2-A

Prep Type: Total/NA

Prep Batch: 63538

	Spike	LUS	LUS			%Rec	
Analyte	Added	Result	Qualifier	Unit D	%Rec	Limits	
Gasoline Range Organics	1000	1130		mg/Kg	113	70 - 130	
(GRO)-C6-C10							
Diesel Range Organics (Over	1000	1110		mg/Kg	111	70 - 130	
C10-C28)							

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	112	70 - 130

Lab Sample ID: LCSD 880-63538/3-A **Client Sample ID: Lab Control Sample Dup**

LCSD LCSD

953.1

1082

Result Qualifier Unit

mg/Kg

mg/Kg

Spike

Added

1000

1000

Matrix: Solid

Analyte

Analysis Batch: 63575

Prep Type: Total/NA Prep Batch: 63538

108

%Rec RPD Limit D %Rec Limits RPD 95 70 - 130 20

3

20

70 - 130

(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)

Gasoline Range Organics

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	102		70 - 130

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

Lab Sample ID: 880-33751-A-21-E MS **Client Sample ID: Matrix Spike**

Matrix: Solid

Analysis Batch: 63575

Prep Type: Total/NA

Prep Batch: 63538

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.6	U F1	1010	641.7	F1	mg/Kg		62	70 - 130	
Diesel Range Organics (Over	<49.6	U F1	1010	603.8	F1	mg/Kg		56	70 - 130	

C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	64	S1-	70 - 130
o-Terphenyl	60	S1-	70 - 130

Lab Sample ID: 880-33751-A-21-F MSD

Matrix: Solid

Analysis Batch: 63575

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 63538

Sample Sample MSD MSD Spike %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Gasoline Range Organics <49.6 U F1 1010 630.6 F1 60 70 - 130 2 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.6 UF1 1010 610.1 F1 mg/Kg 57 70 - 130 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 64 S1-70 - 130 o-Terphenyl 60 S1-70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62978/1-A **Client Sample ID: Method Blank Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 63069

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			09/22/23 12:21	1

Lab Sample ID: LCS 880-62978/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 63069

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	257 9		ma/Ka	_	103	90 - 110	

Lab Sample ID: LCSD 880-62978/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 63069

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	256.8		mg/Kg	_	103	90 - 110		20	

Prep Type: Soluble

Job ID: 890-5296-1 SDG: 03C1558090

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-5295-A-1-B MS Client Sample ID: Matrix Spike

Matrix: Solid

Client: Ensolum

Project/Site: JRU 108H

Analysis Batch: 63069

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Added Limits Analyte Unit D %Rec Chloride 4260 2520 6889 mg/Kg 104 90 - 110

Lab Sample ID: 890-5295-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 63069

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Analyte 2520 90 - 110 Chloride 4260 6871 mg/Kg 104 n

Lab Sample ID: MB 880-62838/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 63122

MB MB Result Qualifier RL Unit Analyte Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 09/22/23 20:09 mg/Kg

Lab Sample ID: LCS 880-62838/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 63122

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits 250.2 Chloride 250 mg/Kg 100 90 - 110

Lab Sample ID: LCSD 880-62838/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 63122

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 250.7 100 mg/Kg 90 - 110

Lab Sample ID: 880-33428-A-5-B MS

Matrix: Solid

Analysis Batch: 63122

Sample Sample Spike MS MS %Rec Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits 253 Chloride 472 703.7 mg/Kg 92 90 - 110

Lab Sample ID: 880-33428-A-5-C MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Analysis Batch: 63122

Sample Sample Spike MSD MSD %Rec Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec 253 92 Chloride 472 704.0 mg/Kg 90 - 110

Lab Sample ID: MB 880-64083/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 64134

Released to Imaging: 3/11/2024 11:17:01 AM

MB MB RL Unit Analyte Result Qualifier D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 10/06/23 08:41 mg/Kg

Eurofins Carlsbad

Client Sample ID: Matrix Spike Prep Type: Soluble

Prep Type: Soluble

QC Sample Results

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-64083/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 64134

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit Limits %Rec Chloride 250 252.5 mg/Kg 101 90 - 110

Lab Sample ID: LCSD 880-64083/3-A Client Sample ID: Lab Control Sample Dup Matrix: Solid **Prep Type: Soluble**

Analysis Batch: 64134

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 250 90 - 110 Chloride 253.4 mg/Kg 101 0

Lab Sample ID: 880-34084-A-3-B MS **Client Sample ID: Matrix Spike Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 64134

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Limits **Analyte** Unit %Rec Chloride 1360 1250 2562 mg/Kg

Lab Sample ID: 880-34084-A-3-C MSD

Matrix: Solid

Analysis Batch: 64134

Spike MSD MSD %Rec **RPD** Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 1360 1250 2557 mg/Kg 96 90 - 110

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

GC VOA

Prep Batch: 62998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Total/NA	Solid	5035	
890-5296-2	FS03	Total/NA	Solid	5035	
890-5296-3	FS04	Total/NA	Solid	5035	
890-5296-4	FS05	Total/NA	Solid	5035	
890-5296-5	FS06	Total/NA	Solid	5035	
890-5296-6	FS07	Total/NA	Solid	5035	
890-5296-7	FS08	Total/NA	Solid	5035	
890-5296-8	FS09	Total/NA	Solid	5035	
890-5296-9	FS10	Total/NA	Solid	5035	
890-5296-10	SW01	Total/NA	Solid	5035	
MB 880-62998/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62998/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62998/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5296-1 MS	FS02	Total/NA	Solid	5035	
890-5296-1 MSD	FS02	Total/NA	Solid	5035	

Prep Batch: 63021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-17	SW08	Total/NA	Solid	5035	
MB 880-63021/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-63021/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-63021/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-33481-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-33481-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 63152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Total/NA	Solid	8021B	62998
890-5296-2	FS03	Total/NA	Solid	8021B	62998
890-5296-3	FS04	Total/NA	Solid	8021B	62998
890-5296-4	FS05	Total/NA	Solid	8021B	62998
890-5296-5	FS06	Total/NA	Solid	8021B	62998
890-5296-6	FS07	Total/NA	Solid	8021B	62998
890-5296-7	FS08	Total/NA	Solid	8021B	62998
890-5296-8	FS09	Total/NA	Solid	8021B	62998
890-5296-9	FS10	Total/NA	Solid	8021B	62998
890-5296-10	SW01	Total/NA	Solid	8021B	62998
MB 880-62998/5-A	Method Blank	Total/NA	Solid	8021B	62998
LCS 880-62998/1-A	Lab Control Sample	Total/NA	Solid	8021B	62998
LCSD 880-62998/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62998
890-5296-1 MS	FS02	Total/NA	Solid	8021B	62998
890-5296-1 MSD	FS02	Total/NA	Solid	8021B	62998

Analysis Batch: 63183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-11	SW02	Total/NA	Solid	8021B	63187
890-5296-12	SW03	Total/NA	Solid	8021B	63187
890-5296-13	SW04	Total/NA	Solid	8021B	63187
890-5296-14	SW05	Total/NA	Solid	8021B	63187
890-5296-15	SW06	Total/NA	Solid	8021B	63187
890-5296-16	SW07	Total/NA	Solid	8021B	63187

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

GC VOA (Continued)

Analysis Batch: 63183 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-63187/5-A	Method Blank	Total/NA	Solid	8021B	63187
LCS 880-63187/1-A	Lab Control Sample	Total/NA	Solid	8021B	63187
LCSD 880-63187/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	63187
890-5322-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	63187
890-5322-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	63187

Prep Batch: 63187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-11	SW02	Total/NA	Solid	5035	
890-5296-12	SW03	Total/NA	Solid	5035	
890-5296-13	SW04	Total/NA	Solid	5035	
890-5296-14	SW05	Total/NA	Solid	5035	
890-5296-15	SW06	Total/NA	Solid	5035	
890-5296-16	SW07	Total/NA	Solid	5035	
MB 880-63187/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-63187/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-63187/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5322-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-5322-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 63239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Total/NA	Solid	Total BTEX	
890-5296-2	FS03	Total/NA	Solid	Total BTEX	
890-5296-3	FS04	Total/NA	Solid	Total BTEX	
890-5296-4	FS05	Total/NA	Solid	Total BTEX	
890-5296-5	FS06	Total/NA	Solid	Total BTEX	
890-5296-6	FS07	Total/NA	Solid	Total BTEX	
890-5296-7	FS08	Total/NA	Solid	Total BTEX	
890-5296-8	FS09	Total/NA	Solid	Total BTEX	
890-5296-9	FS10	Total/NA	Solid	Total BTEX	
890-5296-10	SW01	Total/NA	Solid	Total BTEX	
890-5296-11	SW02	Total/NA	Solid	Total BTEX	
890-5296-12	SW03	Total/NA	Solid	Total BTEX	
890-5296-13	SW04	Total/NA	Solid	Total BTEX	
890-5296-14	SW05	Total/NA	Solid	Total BTEX	
890-5296-15	SW06	Total/NA	Solid	Total BTEX	
890-5296-16	SW07	Total/NA	Solid	Total BTEX	
890-5296-17	SW08	Total/NA	Solid	Total BTEX	

Analysis Batch: 63283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-17	SW08	Total/NA	Solid	8021B	63021
MB 880-63021/5-A	Method Blank	Total/NA	Solid	8021B	63021
LCS 880-63021/1-A	Lab Control Sample	Total/NA	Solid	8021B	63021
LCSD 880-63021/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	63021
880-33481-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	63021
880-33481-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	63021

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

GC Semi VOA

Analysis Batch: 62961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Total/NA	Solid	8015B NM	62999
890-5296-2	FS03	Total/NA	Solid	8015B NM	62999
890-5296-3	FS04	Total/NA	Solid	8015B NM	62999
890-5296-4	FS05	Total/NA	Solid	8015B NM	62999
890-5296-5	FS06	Total/NA	Solid	8015B NM	62999
890-5296-6	FS07	Total/NA	Solid	8015B NM	62999
890-5296-7	FS08	Total/NA	Solid	8015B NM	62999
890-5296-8	FS09	Total/NA	Solid	8015B NM	62999
890-5296-9	FS10	Total/NA	Solid	8015B NM	62999
890-5296-10	SW01	Total/NA	Solid	8015B NM	62999
890-5296-11	SW02	Total/NA	Solid	8015B NM	62999
890-5296-12	SW03	Total/NA	Solid	8015B NM	62999
890-5296-14	SW05	Total/NA	Solid	8015B NM	62999
890-5296-15	SW06	Total/NA	Solid	8015B NM	62999
890-5296-16	SW07	Total/NA	Solid	8015B NM	62999
890-5296-17	SW08	Total/NA	Solid	8015B NM	62999
MB 880-62999/1-A	Method Blank	Total/NA	Solid	8015B NM	62999
LCS 880-62999/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62999
LCSD 880-62999/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62999
880-33478-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	62999
880-33478-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62999

Prep Batch: 62999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Total/NA	Solid	8015NM Prep	
890-5296-2	FS03	Total/NA	Solid	8015NM Prep	
890-5296-3	FS04	Total/NA	Solid	8015NM Prep	
890-5296-4	FS05	Total/NA	Solid	8015NM Prep	
890-5296-5	FS06	Total/NA	Solid	8015NM Prep	
890-5296-6	FS07	Total/NA	Solid	8015NM Prep	
890-5296-7	FS08	Total/NA	Solid	8015NM Prep	
890-5296-8	FS09	Total/NA	Solid	8015NM Prep	
890-5296-9	FS10	Total/NA	Solid	8015NM Prep	
890-5296-10	SW01	Total/NA	Solid	8015NM Prep	
890-5296-11	SW02	Total/NA	Solid	8015NM Prep	
890-5296-12	SW03	Total/NA	Solid	8015NM Prep	
890-5296-14	SW05	Total/NA	Solid	8015NM Prep	
890-5296-15	SW06	Total/NA	Solid	8015NM Prep	
890-5296-16	SW07	Total/NA	Solid	8015NM Prep	
890-5296-17	SW08	Total/NA	Solid	8015NM Prep	
MB 880-62999/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62999/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62999/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-33478-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-33478-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 63085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Total/NA	Solid	8015 NM	
890-5296-2	FS03	Total/NA	Solid	8015 NM	
890-5296-3	FS04	Total/NA	Solid	8015 NM	

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

GC Semi VOA (Continued)

Analysis Batch: 63085 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-4	FS05	Total/NA	Solid	8015 NM	
890-5296-5	FS06	Total/NA	Solid	8015 NM	
890-5296-6	FS07	Total/NA	Solid	8015 NM	
890-5296-7	FS08	Total/NA	Solid	8015 NM	
890-5296-8	FS09	Total/NA	Solid	8015 NM	
890-5296-9	FS10	Total/NA	Solid	8015 NM	
890-5296-10	SW01	Total/NA	Solid	8015 NM	
890-5296-11	SW02	Total/NA	Solid	8015 NM	
890-5296-12	SW03	Total/NA	Solid	8015 NM	
890-5296-13	SW04	Total/NA	Solid	8015 NM	
890-5296-14	SW05	Total/NA	Solid	8015 NM	
890-5296-15	SW06	Total/NA	Solid	8015 NM	
890-5296-16	SW07	Total/NA	Solid	8015 NM	
890-5296-17	SW08	Total/NA	Solid	8015 NM	

Prep Batch: 63538

Lab Sample ID 890-5296-13	Client Sample ID SW04	Prep Type Total/NA	Matrix Solid	Method	Prep Batch
MB 880-63538/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-63538/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-63538/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-33751-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-33751-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 63575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-13	SW04	Total/NA	Solid	8015B NM	63538
MB 880-63538/1-A	Method Blank	Total/NA	Solid	8015B NM	63538
LCS 880-63538/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	63538
LCSD 880-63538/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	63538
880-33751-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	63538
880-33751-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	63538

HPLC/IC

Leach Batch: 62838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-10	SW01	Soluble	Solid	DI Leach	
890-5296-11	SW02	Soluble	Solid	DI Leach	
890-5296-12	SW03	Soluble	Solid	DI Leach	
890-5296-13	SW04	Soluble	Solid	DI Leach	
890-5296-14	SW05	Soluble	Solid	DI Leach	
890-5296-15	SW06	Soluble	Solid	DI Leach	
890-5296-16	SW07	Soluble	Solid	DI Leach	
890-5296-17	SW08	Soluble	Solid	DI Leach	
MB 880-62838/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62838/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62838/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33428-A-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33428-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Eurofins Carlsbad

3

4

6

8

10

12

13

14

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

HPLC/IC

Leach Batch: 62978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Soluble	Solid	DI Leach	
890-5296-2	FS03	Soluble	Solid	DI Leach	
890-5296-3	FS04	Soluble	Solid	DI Leach	
890-5296-5	FS06	Soluble	Solid	DI Leach	
890-5296-6	FS07	Soluble	Solid	DI Leach	
890-5296-7	FS08	Soluble	Solid	DI Leach	
890-5296-8	FS09	Soluble	Solid	DI Leach	
890-5296-9	FS10	Soluble	Solid	DI Leach	
MB 880-62978/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62978/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62978/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5295-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5295-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 63069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-1	FS02	Soluble	Solid	300.0	62978
890-5296-2	FS03	Soluble	Solid	300.0	62978
890-5296-3	FS04	Soluble	Solid	300.0	62978
890-5296-5	FS06	Soluble	Solid	300.0	62978
890-5296-6	FS07	Soluble	Solid	300.0	62978
890-5296-7	FS08	Soluble	Solid	300.0	62978
890-5296-8	FS09	Soluble	Solid	300.0	62978
890-5296-9	FS10	Soluble	Solid	300.0	62978
MB 880-62978/1-A	Method Blank	Soluble	Solid	300.0	62978
LCS 880-62978/2-A	Lab Control Sample	Soluble	Solid	300.0	62978
LCSD 880-62978/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62978
890-5295-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	62978
890-5295-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62978

Analysis Batch: 63122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-10	SW01	Soluble	Solid	300.0	62838
890-5296-11	SW02	Soluble	Solid	300.0	62838
890-5296-12	SW03	Soluble	Solid	300.0	62838
890-5296-13	SW04	Soluble	Solid	300.0	62838
890-5296-14	SW05	Soluble	Solid	300.0	62838
890-5296-15	SW06	Soluble	Solid	300.0	62838
890-5296-16	SW07	Soluble	Solid	300.0	62838
890-5296-17	SW08	Soluble	Solid	300.0	62838
MB 880-62838/1-A	Method Blank	Soluble	Solid	300.0	62838
LCS 880-62838/2-A	Lab Control Sample	Soluble	Solid	300.0	62838
LCSD 880-62838/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62838
880-33428-A-5-B MS	Matrix Spike	Soluble	Solid	300.0	62838
880-33428-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62838

Leach Batch: 64083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-4	FS05	Soluble	Solid	DI Leach	
MB 880-64083/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64083/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

HPLC/IC (Continued)

Leach Batch: 64083 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-64083/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34084-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34084-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 64134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5296-4	FS05	Soluble	Solid	300.0	64083
MB 880-64083/1-A	Method Blank	Soluble	Solid	300.0	64083
LCS 880-64083/2-A	Lab Control Sample	Soluble	Solid	300.0	64083
LCSD 880-64083/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64083
880-34084-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	64083
880-34084-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64083

Page 38 of 51

Job ID: 890-5296-1

Client: Ensolum Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: FS02 Lab Sample ID: 890-5296-1

Date Collected: 09/18/23 13:30 Matrix: Solid Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 18:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 18:29	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/21/23 22:32	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/21/23 22:32	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	62978	09/21/23 11:12	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63069	09/22/23 14:33	SMC	EET MID

Client Sample ID: FS03 Lab Sample ID: 890-5296-2 Date Collected: 09/18/23 13:35 **Matrix: Solid**

Date Received: 09/19/23 16:16

	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	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 18:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 18:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/21/23 22:53	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/21/23 22:53	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62978	09/21/23 11:12	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63069	09/22/23 14:40	SMC	EET MID

Client Sample ID: FS04 Lab Sample ID: 890-5296-3 Date Collected: 09/18/23 13:40 **Matrix: Solid**

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035	_		4.96 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 19:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 19:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/21/23 23:14	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/21/23 23:14	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	62978	09/21/23 11:12	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63069	09/22/23 15:00	SMC	EET MID

Client Sample ID: FS05 Lab Sample ID: 890-5296-4 Date Collected: 09/18/23 13:45 Matrix: Solid

Date Received: 09/19/23 16:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 19:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 19:31	SM	EET MID

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Lab Sample ID: 890-5296-4

Client Sample ID: FS05 Date Collected: 09/18/23 13:45 Matrix: Solid Date Received: 09/19/23 16:16

	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			63085	09/21/23 23:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/21/23 23:36	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	64083	10/06/23 09:12	AG	EET MID
Soluble	Analysis	300.0		1			64134	10/06/23 13:21	CH	EET MID

Lab Sample ID: 890-5296-5 **Client Sample ID: FS06** Date Collected: 09/18/23 13:50 **Matrix: Solid**

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 19:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 19:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/21/23 23:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/21/23 23:57	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62978	09/21/23 11:12	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63069	09/22/23 15:13	SMC	EET MID

Client Sample ID: FS07 Lab Sample ID: 890-5296-6 Date Collected: 09/18/23 13:55 **Matrix: Solid**

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 20:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 20:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 00:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 00:19	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	62978	09/21/23 11:12	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63069	09/22/23 15:20	SMC	EET MID

Client Sample ID: FS08 Lab Sample ID: 890-5296-7 Date Collected: 09/18/23 14:00 Matrix: Solid

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 20:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 20:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 00:40	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	9.97 g 1 uL	10 mL 1 uL	62999 62961	09/21/23 14:25 09/22/23 00:40	TKC SM	EET MID EET MID

Eurofins Carlsbad

10/9/2023 (Rev. 1)

Client: Ensolum

Job ID: 890-5296-1 SDG: 03C1558090

Project/Site: JRU 108H

Client Sample ID: FS08

L

Lab Sample ID: 890-5296-7

Matrix: Solid

Batch Batch Dil Initial Final Batch **Prepared** Method or Analyzed **Prep Type** Type Run **Factor Amount** Amount Number Analyst Lab Soluble DI Leach 62978 09/21/23 11:12 SMC EET MID Leach 4.96 g 50 mL 300.0 Soluble Analysis 50 mL 50 mL 63069 09/22/23 15:26 SMC **EET MID** 1

Client Sample ID: FS09 Lab Sample ID: 890-5296-8

Date Collected: 09/18/23 14:05 Matrix: Solid

Date Received: 09/19/23 16:16

Date Collected: 09/18/23 14:00

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 20:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 20:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 01:23	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 01:23	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	62978	09/21/23 11:12	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63069	09/22/23 15:33	SMC	EET MID

Client Sample ID: FS10 Lab Sample ID: 890-5296-9

Date Collected: 09/18/23 14:10

Date Received: 09/19/23 16:16

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Type Method Run **Factor Amount** Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 4.98 g 5 mL 62998 09/21/23 14:25 EL EET MID Total/NA 8021B 09/24/23 21:13 MNR Analysis 5 mL 5 mL 63152 **EET MID** 1 Total/NA Analysis Total BTEX 1 63239 09/24/23 21:13 SM **EET MID** Total/NA Analysis 8015 NM 1 63085 09/22/23 01:45 SM **EET MID** Total/NA Prep 8015NM Prep 9.95 g 10 mL 62999 09/21/23 14:25 TKC **EET MID** Total/NA Analysis 8015B NM 1 uL 62961 1 1 uL 09/22/23 01:45 SM **EET MID** Soluble Leach DI Leach 5.01 g 50 mL 62978 09/21/23 11:12 SMC **EET MID** Soluble 300.0 50 mL 50 mL 63069 Analysis 1 09/22/23 15:40 SMC **EET MID**

Client Sample ID: SW01

Date Collected: 09/18/23 14:15

Lab Sample ID: 890-5296-10

Matrix: Solid

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	62998	09/21/23 14:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63152	09/24/23 21:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/24/23 21:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 02:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 02:06	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 22:28	CH	EET MID

Eurofins Carlsbad

2

3

5

6

8

10

Project/Site: JRU 108H Client Sample ID: SW02

Client: Ensolum

Lab Sample ID: 890-5296-11

Matrix: Solid

Date Collected: 09/18/23 14:20 Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	63187	09/25/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63183	09/25/23 17:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/25/23 17:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 02:27	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 02:27	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 22:48	CH	EET MID

Client Sample ID: SW03 Lab Sample ID: 890-5296-12 **Matrix: Solid**

Date Collected: 09/18/23 14:25 Date Received: 09/19/23 16:16

	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	63187	09/25/23 08:39	MNR	EET MIC
Total/NA	Analysis	8021B		1	5 mL	5 mL	63183	09/25/23 17:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/25/23 17:35	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 02:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 02:48	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 22:55	CH	EET MID

Client Sample ID: SW04 Lab Sample ID: 890-5296-13

Date Collected: 09/18/23 14:30 **Matrix: Solid** Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	63187	09/25/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63183	09/25/23 17:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/25/23 17:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/29/23 16:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	63538	09/28/23 14:02	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63575	09/29/23 16:25	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 23:01	CH	EET MID

Client Sample ID: SW05 Lab Sample ID: 890-5296-14 Date Collected: 09/18/23 14:35 **Matrix: Solid**

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	63187	09/25/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63183	09/25/23 18:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/25/23 18:16	SM	EET MID

Client: Ensolum Job ID: 890-5296-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: SW05 Lab Sample ID: 890-5296-14 Date Collected: 09/18/23 14:35

Matrix: Solid

Date Received: 09/19/23 16:16

	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			63085	09/22/23 03:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 03:30	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 23:08	CH	EET MID

Client Sample ID: SW06 Lab Sample ID: 890-5296-15

Date Collected: 09/18/23 14:40 **Matrix: Solid**

Date Received: 09/19/23 16:16

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	63187	09/25/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63183	09/25/23 18:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/25/23 18:37	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 03:51	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 03:51	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 23:15	CH	EET MID

Client Sample ID: SW07 Lab Sample ID: 890-5296-16

Date Collected: 09/18/23 14:45 **Matrix: Solid** Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	63187	09/25/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63183	09/25/23 18:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/25/23 18:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 04:12	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	62999	09/21/23 14:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62961	09/22/23 04:12	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 23:21	CH	EET MID

Client Sample ID: SW08 Lab Sample ID: 890-5296-17 Date Collected: 09/18/23 14:50 **Matrix: Solid**

Date Received: 09/19/23 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	63021	09/26/23 08:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63283	09/26/23 13:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			63239	09/26/23 13:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			63085	09/22/23 04:33	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.05 g 1 uL	10 mL 1 uL	62999 62961	09/21/23 14:25 09/22/23 04:33	TKC SM	EET MID EET MID

Lab Chronicle

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: SW08 Lab Sample ID: 890-5296-17

Date Collected: 09/18/23 14:50

Date Received: 09/19/23 16:16

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	62838	09/22/23 10:50	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	63122	09/22/23 23:28	CH	EET MID

Laboratory References:

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

8

10

11

13

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-5296-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-23-26	06-30-24
The following analyte:	s are included in this rend	ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for w
the agency does not	•	ore, but the laboratory is i	to certified by the governing authority.	This list may include analytes for w
,	•	Matrix	Analyte	This list may include allarytes for w
the agency does not o	offer certification.	•	, , ,	This list may include analytes for w

2

4

5

7

9

10

12

13

Method Description

Total BTEX Calculation

Microextraction

EPA = US Environmental Protection Agency

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

Deionized Water Leaching Procedure

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

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

Anions, Ion Chromatography

Closed System Purge and Trap

Method Summary

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

Client: Ensolum

Method

8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

8021B Total BTEX

Project/Site: JRU 108H

Protocol References:

Laboratory References:

ASTM = ASTM International

Job ID: 890-5296-1

SDG: 03C1558090

Protocol	Laboratory
PIOLOCOI	Laboratory
SW846	EET MID
TAL SOP	EET MID
SW846	EET MID
SW846	EET MID
EPA	EET MID
SW846	EET MID

EET MID

EET MID

SW846

ASTM

SW08

890-5296-17

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-5296-1

SDG: 03C1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5296-1	FS02	Solid	09/18/23 13:30	09/19/23 16:16	1
890-5296-2	FS03	Solid	09/18/23 13:35	09/19/23 16:16	4.5
890-5296-3	FS04	Solid	09/18/23 13:40	09/19/23 16:16	4.5
890-5296-4	FS05	Solid	09/18/23 13:45	09/19/23 16:16	8
890-5296-5	FS06	Solid	09/18/23 13:50	09/19/23 16:16	8
890-5296-6	FS07	Solid	09/18/23 13:55	09/19/23 16:16	5.5
890-5296-7	FS08	Solid	09/18/23 14:00	09/19/23 16:16	6
890-5296-8	FS09	Solid	09/18/23 14:05	09/19/23 16:16	6.5
890-5296-9	FS10	Solid	09/18/23 14:10	09/19/23 16:16	7
890-5296-10	SW01	Solid	09/18/23 14:15	09/19/23 16:16	04.5
890-5296-11	SW02	Solid	09/18/23 14:20	09/19/23 16:16	04.5
890-5296-12	SW03	Solid	09/18/23 14:25	09/19/23 16:16	08
890-5296-13	SW04	Solid	09/18/23 14:30	09/19/23 16:16	05.5
890-5296-14	SW05	Solid	09/18/23 14:35	09/19/23 16:16	05.5
890-5296-15	SW06	Solid	09/18/23 14:40	09/19/23 16:16	06
890-5296-16	SW07	Solid	09/18/23 14:45	09/19/23 16:16	06.5

Solid

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

Date/Time

Received by: (Signature)

Chain of Custody

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

Environment Testing

💸 eurofins

Work Order No:

Project Manager.	でなる			Bill to: (if different)	ıt)	Garrett Green		Work Order Comments
Company Name:	Ensolum, LLC	רוכ		Company Name:	-	XTO Energy, In	Program:	UST/PST PRP Brownfields RRC Superfund
	3122 Nati Parks	Parks	Hwy	Address:		3104 E Greene St	State of Project:	
e ZIP:	Carisbad, NM 88220	288 MN	200	City, State ZIP:		Carisbad, NM 88220		ST
	989-854-0852	2852	Email:		obeli	bibelill@ensolum.com	Deliverables: EDD	ADaPT ☐ Other:
Project Name:	IRU IDBH		/ Turn	Turn Around		ANA	ANALYSIS REQUEST	Preservative Codes
er:	0301558090	0	Routine	Rush	Code .			None: NO DI Water: H ₂ O
	32,33541,-103.8318	3.83181	Due Date:					Cool: Cool MeOH: Me
	Meredith Roberts	Sherts	TAT starts the	TAT starts the day received by				
PO #			the lab, if rec	the lab, if received by 4:30pm				H ₂ SO ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank:	Š.	Wet Ice:	Yes No	eters			H ₃ PO ₄ : HP
Samples Received Intact:	Yes) No	Thermometer ID:	er ID:	TODMUT	mei		890-5296 Chain of Custody	NaHSO 4: NABIS
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-actor:	10-	eq.	4	-	Na ₂ S ₂ O ₃ : NaSO 3
Sample Custody Seals:	Yes No N/A	Temperature Reading:	e Reading:	70		u		Zn Acetate+NaOH: Zn
Total Containers:)	Corrected 1	Corrected Temperature:			HO		NaOH+Ascorbic Acid: SAPC
Sample Identification	ion Matrix	Date	Time	Depth Grab/	# of Cont	10		Sample Comments
ESON	V.	9/18/23		ر ا	_	X		Incident #:
F502				4.5'	-			0APP.2217931599
TO II			1340	4.5				
F105			1345	,8				Cost Center:
FSOL			1350	`ω				1139071001
FOSA			1355	5,2,				
F508			1400	e.'				9
FS09			1405	6.5'				mroberts@ensclum.won
C157			1410	7,				
SMO	→	>	1415	0-4.5	>	> > >		

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 negotlated. 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

9119 1616	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)
4	- 0000 CX	2	11911 6116	2
	3			4

ò

Page

www.xenco.com

Revised Date: 08/25/2020 Rev. 2020.2

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

Work Order No: Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Chain of Custody **Environment Testing**

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

Xenco

💸 eurofins

Project Manager:	Ben Belill			Bill to: (if different)		Gar	Garrett Green	Work Or	Work Order Comments
Company Name:	Ensolumitic	10		Company Name:		X	XTO Energy, hc	Program: UST/PST	Brownfields ☐ RRC ☐ Superfund ☐
	3122 Nati Parks HWU	Parks +	IWV	Address:		3104 E	3104 E Greene St	State of Project:	
e ZIP:	Carlobad, NM 88220	JM 882	102	City, State ZIP:		Carlsb.	Carlsbad, NM 88220	Reporting: Level II Level III	☐ PST/UST
	989-854-0852	352	Email:	ppe	Slike	Senso	bbetille ensolumion	Deliverables: EDD	ADaPT ☐ Other:
Project Name:	JRU 108H		/ Turn	Turn Around			ANALYSIS REQUEST	JEST	Preservative Codes
er:	0361558090	~	Routine	l ks	Pres. Code				None: NO DI Water: H ₂ O
Project Location: 32	2.33.41,-103.	83i8i	Due Date:						Cool: Cool MeOH: Me
	Mereditin Roberts	erts	TAT starts the	TAT starts the day received by					HCL: HC HNO 3: HN
			the lab, if rece	ived by 4:30pm	S				H ₂ SO ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank:	Zes N	Wet ke:	Yes No	eter				H3PO4: HP
Samples Received Intact:	(Yes)No	Thermometer ID:	ır ID:	TUMBER	mea	5			NaHSO 4: NABIS
Cooler Custody Seals:	Yes No N/A	Correction Factor:	actor:	-0.1	БЧ	2):			Na 25 20 3: NaSO 3
Sample Custody Seals:	Yes No N/A	Temperature Reading:	Reading:	<u></u>) in			Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	emperature:			IOI EX	He		NaOH+Ascorbic Acid: SAPC
Sample Identification	ion Matrix	Date Sampled	Time	Depth Grab/	# of Cont	47	4		Sample Comments
SW02	S	9/19/13	1420	0-45' C		X	X		Incident #:
SW03			1425	1 1,8-0					n APP22179 31599
SWOA			1430	0.5.5					
SWOS			1435	0-55					Cost Center:
SWOL			1440	3-0					10011701211
SWOT			1445	0-6.5					
SW08	→	÷	1450	D-7/	>	\ \ \	-		mrcberts@ensolun en
							>mc		
\									
Total 2007 / 6010	200.8 / 6020:	88	BRCRA 13PPM	Texas 11	I Sb A	Al Sb As Ba Be B Cd	Cd Ca Cr Co Cu Fe Pb Mc	Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO, Na Sr Tl Sn U V Zn	ta Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be ana		TCLP/Si	1.P 6010 : 8RCR	₹A Sb	As Ba Be C	TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	Se Ag TI U Hg: 1631 / 2	Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of 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 negodated. 9/9/ Date/Time 0/2 Received by: (Signature) (Signature)

Page 49 of 51

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5296-1 SDG Number: 03C1558090

Login Number: 5296 **List Source: Eurofins Carlsbad**

List Number: 1

Creator: Lopez, Abraham

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

Released to Imaging: 3/11/2024 11:17:01 AM

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5296-1 SDG Number: 03C1558090

Login Number: 5296 **List Source: Eurofins Midland** List Number: 2 List Creation: 09/21/23 10:54 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 10/17/2023 10:39:08 AM

JOB DESCRIPTION

JRU 108H SDG NUMBER 03C1558090

JOB NUMBER

890-5457-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated 10/17/2023 10:39:08 AM

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

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-5457-1
SDG: 03C1558090

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	9
QC Sample Results	10
QC Association Summary	14
Lab Chronicle	16
Certification Summary	17
Method Summary	18
Sample Summary	19
Chain of Custody	20
Racaint Chacklists	21

2

3

4

6

8

9

11

12

Definitions/Glossary

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Qualifiers

GC VOA

Qualifier Description

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

F1 MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

Glossary

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

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

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

NC Not Calculated

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

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Eurofins Carlsbad

4

5

7

9

1 1

Case Narrative

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Job ID: 890-5457-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5457-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/13/2023~2:23~PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was $1.8^{\circ}C$

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS11 (890-5457-1), SW09 (890-5457-2) and SW10 (890-5457-3).

GC VOA

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

GC Semi VOA

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-64789 and analytical batch 880-64805 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.

3

_

9

11

13

Client: Ensolum Job ID: 890-5457-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: FS11

Lab Sample ID: 890-5457-1 Date Collected: 10/10/23 10:00

Matrix: Solid

Date Received: 10/13/23 14:23

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		10/16/23 08:37	10/16/23 12:22	1
Toluene	<0.00198	U	0.00198	mg/Kg		10/16/23 08:37	10/16/23 12:22	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		10/16/23 08:37	10/16/23 12:22	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		10/16/23 08:37	10/16/23 12:22	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		10/16/23 08:37	10/16/23 12:22	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		10/16/23 08:37	10/16/23 12:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			10/16/23 08:37	10/16/23 12:22	1
1,4-Difluorobenzene (Surr)	76		70 - 130			10/16/23 08:37	10/16/23 12:22	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			10/16/23 12:22	1
	el Range Organ	ics (DRO) (GC)					
Method: SW846 8015 NM - Diese		ics (DRO) (Qualifier	GC)	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte		Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/16/23 13:08	
Method: SW846 8015 NM - Diese Analyte Total TPH	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared		
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared Prepared		1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	Result <49.9	Qualifier Unics (DRO) Qualifier	RL 49.9	mg/Kg			10/16/23 13:08	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10	Result <49.9 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	RL 49.9 (GC)	mg/Kg		Prepared	10/16/23 13:08 Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GR0)-C6-C10 Diesel Range Organics (Over	Result <49.9 sel Range Orga Result <49.9	Qualifier U nics (DRO) Qualifier U	(GC) RL 49.9	mg/Kg Unit mg/Kg		Prepared 10/16/23 10:59	10/16/23 13:08 Analyzed 10/16/23 13:08	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GR0)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 sel Range Orga Result <49.9	Qualifier U nics (DRO) Qualifier U	(GC) RL 49.9	mg/Kg Unit mg/Kg		Prepared 10/16/23 10:59	10/16/23 13:08 Analyzed 10/16/23 13:08	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/16/23 10:59 10/16/23 10:59	10/16/23 13:08 Analyzed 10/16/23 13:08 10/16/23 13:08	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)	Result	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/16/23 10:59 10/16/23 10:59 10/16/23 10:59	Analyzed 10/16/23 13:08 10/16/23 13:08 10/16/23 13:08 10/16/23 13:08	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U nics (DRO) Qualifier U U	RL 49.9 (GC) RL 49.9 49.9 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/16/23 10:59 10/16/23 10:59 10/16/23 10:59 Prepared	10/16/23 13:08 Analyzed 10/16/23 13:08 10/16/23 13:08 10/16/23 13:08 Analyzed	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese 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 nics (DRO) Qualifier U U Qualifier	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/16/23 10:59 10/16/23 10:59 10/16/23 10:59 Prepared 10/16/23 10:59	10/16/23 13:08 Analyzed 10/16/23 13:08 10/16/23 13:08 10/16/23 13:08 Analyzed 10/16/23 13:08	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion Analyte	Result <49.9	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/16/23 10:59 10/16/23 10:59 10/16/23 10:59 Prepared 10/16/23 10:59	10/16/23 13:08 Analyzed 10/16/23 13:08 10/16/23 13:08 10/16/23 13:08 Analyzed 10/16/23 13:08	1 Dil Fac

Client Sample ID: SW09 Lab Sample ID: 890-5457-2

Date Collected: 10/10/23 10:30 Date Received: 10/13/23 14:23

Matrix: Solid

Method: SW846 8021B - Volat	•	•						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/16/23 08:37	10/16/23 12:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/16/23 08:37	10/16/23 12:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/16/23 08:37	10/16/23 12:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/16/23 08:37	10/16/23 12:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/16/23 08:37	10/16/23 12:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/16/23 08:37	10/16/23 12:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130			10/16/23 08:37	10/16/23 12:43	1
1,4-Difluorobenzene (Surr)	72		70 - 130			10/16/23 08:37	10/16/23 12:43	1

Eurofins Carlsbad

Released to Imaging: 3/11/2024 11:17:01 AM

Client Sample Results

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: SW09 Lab Sample ID: 890-5457-2

Date Collected: 10/10/23 10:30 Matrix: Solid
Date Received: 10/13/23 14:23

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/16/23 12:43	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	475		50.3	mg/Kg			10/16/23 14:17	1
Analyte		Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<50.3	U	50.3	mg/Kg		10/16/23 10:59	10/16/23 14:17	1
(GRO)-C6-C10								
Diesel Range Organics (Over	475		50.3	mg/Kg		10/16/23 10:59	10/16/23 14:17	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		10/16/23 10:59	10/16/23 14:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Method: EPA 300.0 - Anions, Ion Chromatography - SolubleAnalyteResultQualifierRLUnitDPreparedAnalyzedDil FacChloride1275.05mg/Kg10/16/23 15:491

70 - 130

Client Sample ID: SW10

Lab Sample ID: 890-5457-3

Date Collected: 10/10/23 10:40

Matrix: Solid

Date Received: 10/13/23 14:23

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 13:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 13:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 13:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/16/23 08:37	10/16/23 13:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 13:04	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/16/23 08:37	10/16/23 13:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130			10/16/23 08:37	10/16/23 13:04	1
1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX Analyte		culation Qualifier	70 ₋ 130 R L	Unit	D	10/16/23 08:37 Prepared	10/16/23 13:04 Analyzed	
		culation	70 - 130			10/16/23 08:37	10/16/23 13:04	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	Qualifier		Unit mg/Kg	<u>D</u>			Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX	- Total BTEX Cald Result <0.00399	Qualifier U	RL 0.00399		<u>D</u>		Analyzed	Dil Fac
Method: TAL SOP Total BTEX Analyte	- Total BTEX Calc Result <0.00399 esel Range Organ	Qualifier U	RL 0.00399		<u>D</u>		Analyzed	Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Did	- Total BTEX Calc Result <0.00399 esel Range Organ	Qualifier U ics (DRO) (Qualifier	RL 0.00399	mg/Kg		Prepared	Analyzed 10/16/23 13:04	Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Did Analyte	- Total BTEX Calc Result <0.00399 esel Range Organ Result <50.5	Qualifier U ics (DRO) (Qualifier U	RL 0.00399 GC) RL 50.5	mg/Kg		Prepared	Analyzed 10/16/23 13:04 Analyzed	Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Did Analyte Total TPH	- Total BTEX Calc Result <0.00399 esel Range Organ Result <50.5	Qualifier U ics (DRO) (Qualifier U	RL 0.00399 GC) RL 50.5	mg/Kg		Prepared	Analyzed 10/16/23 13:04 Analyzed	Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Did Analyte Total TPH Method: SW846 8015B NM - Did Method: S	- Total BTEX Calc Result <0.00399 esel Range Organ Result <50.5	Qualifier U ics (DRO) (Qualifier U nics (DRO) Qualifier	RL 0.00399 GC) RL 50.5	mg/Kg Unit mg/Kg	<u>D</u>	Prepared Prepared	Analyzed 10/16/23 13:04 Analyzed 10/16/23 14:40	Dil Fac

Eurofins Carlsbad

2

3

7

6

8

10

12

10/16/23 10:59

10/16/23 14:17

Date Received: 10/13/23 14:23

Client Sample Results

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: SW10

Date Collected: 10/10/23 10:40

Lab Sample ID: 890-5457-3

Matrix: Solid

Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC) (Continued)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		10/16/23 10:59	10/16/23 14:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			10/16/23 10:59	10/16/23 14:40	1
o-Terphenvl	96		70 - 130			10/16/23 10:59	10/16/23 14:40	1

 Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 119
 5.03
 mg/Kg
 10/16/23 15:55
 1

5

10

12

13

Surrogate Summary

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recove
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5455-A-1-A MS	Matrix Spike	119	94	
890-5455-A-1-B MSD	Matrix Spike Duplicate	113	113	
890-5457-1	FS11	95	76	
890-5457-2	SW09	89	72	
890-5457-3	SW10	94	79	
LCS 880-64769/1-A	Lab Control Sample	119	112	
LCSD 880-64769/2-A	Lab Control Sample Dup	112	114	
MB 880-64769/5-A	Method Blank	78	90	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

_			
		1001	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5457-1	FS11	76	82
890-5457-1 MS	FS11	82	72
890-5457-1 MSD	FS11	82	71
890-5457-2	SW09	97	99
890-5457-3	SW10	92	96
LCS 880-64788/2-A	Lab Control Sample	97	99
LCSD 880-64788/3-A	Lab Control Sample Dup	99	93
MB 880-64788/1-A	Method Blank	93	98

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-5457-1 SDG: 03C1558090 Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-64769/5-A

Matrix: Solid Analysis Batch: 64759 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 64769

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 11:20	
Toluene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 11:20	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 11:20	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/16/23 08:37	10/16/23 11:20	
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/16/23 08:37	10/16/23 11:20	
Xvlenes Total	< 0.00400	U	0.00400	ma/Ka		10/16/23 08:37	10/16/23 11:20	

MB MB

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	_	10/16/23 08:37	10/16/23 11:20	1
1,4-Difluorobenzene (Surr)	90		70 - 130		10/16/23 08:37	10/16/23 11:20	1

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 880-64769/1-A

Matrix: Solid

Analysis Batch: 64759

Prep Type: Total/NA

Prep Batch: 64769

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09322		mg/Kg		93	70 - 130	
Toluene	0.100	0.09263		mg/Kg		93	70 - 130	
Ethylbenzene	0.100	0.1010		mg/Kg		101	70 - 130	
m-Xylene & p-Xylene	0.200	0.2221		mg/Kg		111	70 - 130	
o-Xylene	0.100	0.1104		mg/Kg		110	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	119	70 - 130
1,4-Difluorobenzene (Surr)	112	70 - 130

Lab Sample ID: LCSD 880-64769/2-A

Matrix: Solid

Analysis Batch: 64759

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 64769

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09816		mg/Kg		98	70 - 130	5	35	
Toluene	0.100	0.09206		mg/Kg		92	70 - 130	1	35	
Ethylbenzene	0.100	0.09430		mg/Kg		94	70 - 130	7	35	
m-Xylene & p-Xylene	0.200	0.2044		mg/Kg		102	70 - 130	8	35	
o-Xylene	0.100	0.1021		mg/Kg		102	70 - 130	8	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	112	70 - 130
1,4-Difluorobenzene (Surr)	114	70 - 130

Lab Sample ID: 890-5455-A-1-A MS

Matrix: Solid

Analysis Batch: 64759

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

Prep Batch: 64769

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.0998	0.1041		mg/Kg	_	104	70 - 130	
Toluene	<0.00201	U	0.0998	0.1002		mg/Kg		100	70 - 130	

Eurofins Carlsbad

Client: Ensolum Job ID: 890-5457-1 SDG: 03C1558090 Project/Site: JRU 108H

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

Lab Sample ID: 890-5455-A-1-A MS

Matrix: Solid

Analysis Batch: 64759

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 64769

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.0998	0.1051		mg/Kg		105	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2264		mg/Kg		113	70 - 130	
o-Xylene	<0.00201	U	0.0998	0.1122		mg/Kg		112	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 64769

Lab Sample ID: 890-5455-A-1-B MSD **Matrix: Solid**

Analysis Batch: 64759

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.100	0.08916		mg/Kg		89	70 - 130	15	35
Toluene	<0.00201	U	0.100	0.08403		mg/Kg		84	70 - 130	18	35
Ethylbenzene	<0.00201	U	0.100	0.08680		mg/Kg		87	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1859		mg/Kg		93	70 - 130	20	35
o-Xylene	<0.00201	U	0.100	0.09348		mg/Kg		93	70 - 130	18	35

MSD MSD

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

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

Lab Sample ID: MB 880-64788/1-A

Matrix: Solid

Analysis Batch: 64753

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

Prep Batch: 64788

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		10/16/23 08:00	10/16/23 08:49	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		10/16/23 08:00	10/16/23 08:49	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/16/23 08:00	10/16/23 08:49	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	10/16/23 08:00	10/16/23 08:49	1
o-Terphenyl	98		70 - 130	10/16/23 08:00	10/16/23 08:49	1

Lab Sample ID: LCS 880-64788/2-A

Matrix: Solid

Analysis Batch: 64753

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

Prep Batch: 64788

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	881.8		mg/Kg		88	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	915.4		mg/Kg		92	70 - 130	
C10-C28)								

Job ID: 890-5457-1 Client: Ensolum Project/Site: JRU 108H SDG: 03C1558090

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

LCSD LCSD

MS MS

<49.9 U

Qualifier

%Recovery

Lab Sample ID: LCS 880-64788/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 64753

Prep Type: Total/NA

Prep Batch: 64788

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 97 70 - 130 o-Terphenyl 99 70 - 130

Lab Sample ID: LCSD 880-64788/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 64753

Prep Type: Total/NA Prep Batch: 64788

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit

1000 866.4 87 70 - 1302 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 877.5 88 mg/Kg 70 - 13020

C10-C28)

Surrogate

99 70 - 130 1-Chlorooctane 93 70 - 130 o-Terphenyl

Limits

Lab Sample ID: 890-5457-1 MS Client Sample ID: FS11

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 64753** Prep Batch: 64788

Sample Sample MS MS Spike

Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits D Gasoline Range Organics <49.9 U 991 734.8 mg/Kg 72 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 991 703.9 mg/Kg 71 70 - 130

C10-C28)

%Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 82 o-Terphenyl 72 70 - 130

991

Lab Sample ID: 890-5457-1 MSD Client Sample ID: FS11

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 64753 Prep Batch: 64788

Sample Sample MSD MSD RPD Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit Gasoline Range Organics U 991 733.4 <49.9 mg/Kg 71 70 - 130 20 (GRO)-C6-C10

712.2

mg/Kg

72

70 - 130

Diesel Range Organics (Over

C10-C28)

MSD MSD %Recovery Qualifier Surrogate Limits

1-Chlorooctane 82 70 - 130 71 70 - 130 o-Terphenyl

Eurofins Carlsbad

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

QC Sample Results

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64789/1-A

Matrix: Solid

Analysis Batch: 64805

мв мв

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 <5.00</td>
 U
 5.00
 mg/Kg
 10/16/23 13:42
 1

Lab Sample ID: LCS 880-64789/2-A

Matrix: Solid

Analysis Batch: 64805

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 246.6 mg/Kg 99 90 - 110

Lab Sample ID: LCSD 880-64789/3-A

Matrix: Solid

Analysis Batch: 64805

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 244.7 mg/Kg 90 - 110

Lab Sample ID: 880-34454-A-1-B MS

Matrix: Solid

Analysis Batch: 64805

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 5020 Chloride 10200 17030 F1 136 90 - 110 mg/Kg

Lab Sample ID: 880-34454-A-1-C MSD

Matrix: Solid

Analysis Batch: 64805

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 10200 F1 5020 17010 F1 Chloride mg/Kg 136 90 - 110 0 20

QC Association Summary

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

GC VOA

Analysis Batch: 64759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Total/NA	Solid	8021B	64769
890-5457-2	SW09	Total/NA	Solid	8021B	64769
890-5457-3	SW10	Total/NA	Solid	8021B	64769
MB 880-64769/5-A	Method Blank	Total/NA	Solid	8021B	64769
LCS 880-64769/1-A	Lab Control Sample	Total/NA	Solid	8021B	64769
LCSD 880-64769/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64769
890-5455-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	64769
890-5455-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	64769

Prep Batch: 64769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Total/NA	Solid	5035	<u> </u>
890-5457-2	SW09	Total/NA	Solid	5035	
890-5457-3	SW10	Total/NA	Solid	5035	
MB 880-64769/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64769/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64769/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5455-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-5455-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 64830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Total/NA	Solid	Total BTEX	
890-5457-2	SW09	Total/NA	Solid	Total BTEX	
890-5457-3	SW10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 64753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Total/NA	Solid	8015B NM	64788
890-5457-2	SW09	Total/NA	Solid	8015B NM	64788
890-5457-3	SW10	Total/NA	Solid	8015B NM	64788
MB 880-64788/1-A	Method Blank	Total/NA	Solid	8015B NM	64788
LCS 880-64788/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64788
LCSD 880-64788/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64788
890-5457-1 MS	FS11	Total/NA	Solid	8015B NM	64788
890-5457-1 MSD	FS11	Total/NA	Solid	8015B NM	64788

Prep Batch: 64788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Total/NA	Solid	8015NM Prep	
890-5457-2	SW09	Total/NA	Solid	8015NM Prep	
890-5457-3	SW10	Total/NA	Solid	8015NM Prep	
MB 880-64788/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64788/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-64788/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5457-1 MS	FS11	Total/NA	Solid	8015NM Prep	
890-5457-1 MSD	FS11	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

2

3

4

6

8

1 N

12

13

QC Association Summary

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

GC Semi VOA

Analysis Batch: 64870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Total/NA	Solid	8015 NM	
890-5457-2	SW09	Total/NA	Solid	8015 NM	
890-5457-3	SW10	Total/NA	Solid	8015 NM	
_					

HPLC/IC

Leach Batch: 64789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Soluble	Solid	DI Leach	
890-5457-2	SW09	Soluble	Solid	DI Leach	
890-5457-3	SW10	Soluble	Solid	DI Leach	
MB 880-64789/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64789/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64789/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34454-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34454-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 64805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5457-1	FS11	Soluble	Solid	300.0	64789
890-5457-2	SW09	Soluble	Solid	300.0	64789
890-5457-3	SW10	Soluble	Solid	300.0	64789
MB 880-64789/1-A	Method Blank	Soluble	Solid	300.0	64789
LCS 880-64789/2-A	Lab Control Sample	Soluble	Solid	300.0	64789
LCSD 880-64789/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64789
880-34454-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	64789
880-34454-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64789

Eurofins Carlsbad

1

2

4

_

R

9

11

. .

4 4

Job ID: 890-5457-1 SDG: 03C1558090

Client: Ensolum Project/Site: JRU 108H

Lab Sample ID: 890-5457-1

Matrix: Solid

Client Sample ID: FS11 Date Collected: 10/10/23 10:00 Date Received: 10/13/23 14:23

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 64769 Total/NA Prep 5.05 g 5 mL 10/16/23 08:37 MNR **EET MID** 8021B Total/NA Analysis 1 5 mL 5 mL 64759 10/16/23 12:22 MNR **EET MID** Total/NA Analysis Total BTEX 64830 10/16/23 12:22 SM **EET MID** Total/NA 8015 NM 64870 10/16/23 13:08 **EET MID** Analysis 1 SM Total/NA 8015NM Prep 64788 10/16/23 10:59 TKC EET MID Prep 10.02 g 10 mL Total/NA Analysis 8015B NM 1 uL 1 uL 64753 10/16/23 13:08 SM **EET MID** Soluble DI Leach 4.96 g 50 mL 64789 10/16/23 11:34 SMC Leach **EET MID** Soluble Analysis 300.0 50 mL 50 mL 64805 10/16/23 15:32 СН **EET MID**

Client Sample ID: SW09 Lab Sample ID: 890-5457-2

Date Collected: 10/10/23 10:30 **Matrix: Solid** Date Received: 10/13/23 14:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	64769	10/16/23 08:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64759	10/16/23 12:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64830	10/16/23 12:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			64870	10/16/23 14:17	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64788	10/16/23 10:59	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64753	10/16/23 14:17	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	64789	10/16/23 11:34	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64805	10/16/23 15:49	CH	EET MID

Client Sample ID: SW10 Lab Sample ID: 890-5457-3

Date Collected: 10/10/23 10:40 **Matrix: Solid** Date Received: 10/13/23 14:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	64769	10/16/23 08:37	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64759	10/16/23 13:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64830	10/16/23 13:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			64870	10/16/23 14:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	64788	10/16/23 10:59	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64753	10/16/23 14:40	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	64789	10/16/23 11:34	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64805	10/16/23 15:55	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Laboratory: Eurofins Midland

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

Authority	Progra	am	Identification Number	Expiration Date			
Texas	NELA	Р	T104704400-23-26	06-30-24			
,	are included in this report, but oes not offer certification.	it the laboratory is not certif	fied by the governing authority. This lis	t may include analytes			
Analysis Method	Prep Method	Matrix	Analyte				
8015 NM	 -	Solid	Total TPH				
Total BTEX		Solid	Total BTEX				

6

8

10

12

13

EET MID

ASTM

Method Summary

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 EET MID Total BTEX Calculation TAL SOP Total BTEX EET MID 8015 NM Diesel Range Organics (DRO) (GC) SW846 **EET MID** 8015B NM Diesel Range Organics (DRO) (GC) SW846 **EET MID** 300.0 Anions, Ion Chromatography EPA **EET MID** 5035 **EET MID** Closed System Purge and Trap SW846 8015NM Prep Microextraction SW846 EET MID

Protocol References:

DI Leach

ASTM = ASTM International

EPA = US Environmental Protection Agency

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:

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

Eurofins Carlsbad

5

7

10

13

Sample Summary

 Client: Ensolum
 Job ID: 890-5457-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-5457-1	FS11	Solid	10/10/23 10:00	10/13/23 14:23
890-5457-2	SW09	Solid	10/10/23 10:30	10/13/23 14:23
890-5457-3	SW10	Solid	10/10/23 10:40	10/13/23 14:23

3

4

5

Q

9

11

12

Work Order No:

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

Environment Testing

eurofins

X

8-3199 www.xenco.com Page of	Work Order Comments	Program: UST/PST PRP Brownfields RRC Superfund	State of Project:	Reporting: Level III PST/UST TRRP Level IV	Deliverables: EDD ADaPT Other:	ANALYSIS REQUEST Preservative Codes	None: NO DI Water: H ₂ O	Cool: Cool MeOH: Me HCL: HC HNO 3: HN H250 4: H2 NaOH: Na	VABIS VaSO 3 H-NaOH:	Sample Comments	The Oral ID	Norg 2217931899	(Accorded	1137071001			Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn ERA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631/245.1/7470 /7471	s. it assigns standard terms and conditions the control in the enforced unless previously negotiated.	Relinquished by: (Signature) Received by: (Signature) Date/Time
Robbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Garrett Green	XTO Energy	3104 E. Green	Carlsbud, Nr. 88				0,000	X 805] \$108 8012 \$119 R FLY 39	Chi						3/	As Ba Be B Cd Ca Cr Co Sb As Ba Be Cd Cr Co Cu	ins Xenco, its affiliates and subcontractors uses incurred by the client if such losses are curofins Xenco, but not analyzed. These ten	Date/Time Relingu
Hobbs, NM (Bill to: (if different)	Company Name:	Address:		Email: Caevrett.	Turn Around	Routine Rush Code	Due Date: 2 Day Tarts the day received by the lab, if received by 4:30pm	Wet Ice: Yes No Lor: TAMOO Parameters Feading: A. O. A. Derature: A. O. A. O. A. O. A. O. A. O. A. O. O. A. O. O. A. O. O. A. O.	Time Depth Grab/ # of Cont	9	1030 0-6 C 1	1040 0-6 C				8RCRA 13PPM Texas 11 Al Sb As Ba Be E TCLP/SPLP 6010 : 8RCRA Sb As Ba Be	d purchase order from client company to Euro iume any responsibility for any losses or exper a charge of \$5 for each sample submitted to I	(Signature)
	Bro Beill	noolim	3122 National Parks Hav	aleta MM SKIZO	303-887-2946	JRU 109 H	0608	{ ,	Tempellank: Yes No (Yes No N/A) (Yes No N/A) (Temperature Factor Temperature Factor No N/A) (Corrected Temperature Factor Tempe	Matrix	100						Total 200.7 / 6010 200.8 / 6020: 8RC Circle Method(s) and Metal(s) to be analyzed	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Xenco, will be labele only for the captiled to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Signature) Beceived by: (Signatur
	Project Manager:			e 7IP.	121	Project Name:	er:		SAMPLE RECEIPT Samples Received Intact: Cooler Custody Seals: Sample Custody Seals: Total Containers:	Sample Identification	FCII	SMOD	SWIO				Total 200.7 / 6010 Circle Method(s) an	Notice: Signature of this docum of service. Eurofins Xenco will b of Eurofins Xenco. A minimum	Relinquished by: (Signature)

10/17/2023

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5457-1 SDG Number: 03C1558090

Login Number: 5457 List Source: Eurofins Carlsbad

List Number: 1

Creator: Bruns, Shannon

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5457-1 SDG Number: 03C1558090

Login Number: 5457
List Source: Eurofins Midland
List Number: 2
List Creation: 10/16/23 08:35 AM

Creator: Rodriguez, Leticia

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

4

3

6

8

10

12

IC

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 10/20/2023 10:54:06 AM

JOB DESCRIPTION

JRU 108H SDG NUMBER 03C1558090

JOB NUMBER

890-5473-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated 10/20/2023 10:54:06 AM

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

J

4

5

6

0

9

10

13

Client: Ensolum
Project/Site: JRU 108H
Laboratory Job ID: 890-5473-1
SDG: 03C1558090

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receint Checklists	19

Definitions/Glossary

Job ID: 890-5473-1 Client: Ensolum Project/Site: JRU 108H SDG: 03C1558090

Qualifiers

GC VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description

F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

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

HPLC/IC

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

Glossary

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

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

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

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

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

Case Narrative

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Job ID: 890-5473-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5473-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 10/17/2023 3:13 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 1.2°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: SW09A (890-5473-1).

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-65041 and analytical batch 880-65018 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-65018/31), (CCV 880-65018/47) and (CCV 880-65018/58). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-5474-A-1-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-65041 and analytical batch 880-65018 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-65041 and analytical batch 880-65018. The associated laboratory control sample (LCS) met acceptance criteria.

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.

3

5

7

10

12

10

| | 4

Matrix: Solid

Lab Sample ID: 890-5473-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Client Sample ID: SW09A

Date Collected: 10/17/23 01:15 Date Received: 10/17/23 15:13

Sample Depth: 0'-6'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/19/23 13:06	10/19/23 22:37	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:37	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/19/23 13:06	10/19/23 22:37	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130			10/19/23 13:06	10/19/23 22:37	1
1,4-Difluorobenzene (Surr)	82		70 - 130			10/19/23 13:06	10/19/23 22:37	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00399	U	0.00399	mg/Kg			10/19/23 22:37	1
Method: SW846 8015 NM - Diese Analyte		ics (DRO) (Qualifier	GC) RL					
-			KL	Unit	D	Prepared	Analyzed	Dil Fac
	<50.1		50.1	mg/Kg	<u>D</u>	Prepared	Analyzed 10/20/23 02:53	
Total TPH	<50.1	U	50.1		<u>D</u>	Prepared		
Total TPH Method: SW846 8015B NM - Dies	<50.1	U	50.1		D	Prepared		1
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	<50.1	nics (DRO) Qualifier	50.1 (GC)	mg/Kg			10/20/23 02:53	Dil Fac
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<50.1 sel Range Orga Result	nics (DRO) Qualifier	50.1 (GC)	mg/Kg		Prepared	10/20/23 02:53 Analyzed	Dil Fac
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.1 sel Range Orga Result <50.1	Dinics (DRO) Qualifier U	50.1 (GC) RL 50.1	mg/Kg Unit mg/Kg		Prepared 10/19/23 12:14	10/20/23 02:53 Analyzed 10/20/23 02:53	Dil Fac
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.1 sel Range Orga Result <50.1 <50.1	Unics (DRO) Qualifier U	50.1 (GC) RL 50.1 50.1	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/19/23 12:14 10/19/23 12:14	10/20/23 02:53 Analyzed 10/20/23 02:53 10/20/23 02:53	Dil Fac
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.1 sel Range Orga Result <50.1 <50.1 <50.1	Unics (DRO) Qualifier U	50.1 (GC) RL 50.1 50.1 50.1	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/19/23 12:14 10/19/23 12:14 10/19/23 12:14	Analyzed 10/20/23 02:53 10/20/23 02:53 10/20/23 02:53	Dil Face
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<50.1 sel Range Orga Result <50.1 <50.1 <50.1 %Recovery	Unics (DRO) Qualifier U	50.1 (GC) RL 50.1 50.1 50.1 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/19/23 12:14 10/19/23 12:14 10/19/23 12:14 Prepared	Analyzed 10/20/23 02:53 Analyzed 10/20/23 02:53 10/20/23 02:53 Analyzed	Dil Fac
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	<50.1 sel Range Orga Result <50.1 <50.1 <50.1 <50.1 %Recovery 127 107	Oualifier U Qualifier U Qualifier	50.1 (GC) RL 50.1 50.1 50.1 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/19/23 12:14 10/19/23 12:14 10/19/23 12:14 Prepared 10/19/23 12:14	10/20/23 02:53 Analyzed 10/20/23 02:53 10/20/23 02:53 10/20/23 02:53 Analyzed 10/20/23 02:53	Dil Fac
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<50.1 sel Range Orga Result <50.1 <50.1 <50.1 <50.1 <70.1 *Recovery 127 107 *Chromatograp	Oualifier U Qualifier U Qualifier	50.1 (GC) RL 50.1 50.1 50.1 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/19/23 12:14 10/19/23 12:14 10/19/23 12:14 Prepared 10/19/23 12:14	10/20/23 02:53 Analyzed 10/20/23 02:53 10/20/23 02:53 10/20/23 02:53 Analyzed 10/20/23 02:53	Dil Face Dil Face Dil Face Dil Face Dil Face Dil Face

Surrogate Summary

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5473-1	SW09A	90	82
890-5473-1 MS	SW09A	123	104
890-5473-1 MSD	SW09A	125	115
LCS 880-65043/1-A	Lab Control Sample	126	102
LCSD 880-65043/2-A	Lab Control Sample Dup	127	109
MB 880-64998/5-A	Method Blank	77	91
MB 880-65043/5-A	Method Blank	80	86
Surrogate Legend			
BFB = 4-Bromofluorober	nzene (Surr)		

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recov
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5473-1	SW09A	127	107	
890-5474-A-1-E MS	Matrix Spike	129	90	
890-5474-A-1-F MSD	Matrix Spike Duplicate	120	94	
LCS 880-65041/2-A	Lab Control Sample	92	87	
LCSD 880-65041/3-A	Lab Control Sample Dup	83	74	
MB 880-65041/1-A	Method Blank	198 S1+	168 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Carlsbad

3

4

6

8

10

12

Client: Ensolum Job ID: 890-5473-1 SDG: 03C1558090 Project/Site: JRU 108H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-64998/5-A

Analysis Batch: 65025

Matrix: Solid

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

Prep Batch: 64998

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:14	10/19/23 11:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:14	10/19/23 11:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:14	10/19/23 11:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/18/23 15:14	10/19/23 11:37	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:14	10/19/23 11:37	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/18/23 15:14	10/19/23 11:37	1

MB MB

Surrogate	%Recovery Q	ualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77	70 - 130	10/18/23 15:14	10/19/23 11:37	1
1,4-Difluorobenzene (Surr)	91	70 - 130	10/18/23 15:14	10/19/23 11:37	1

Lab Sample ID: MB 880-65043/5-A

Matrix: Solid

Analysis Batch: 65025

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65043

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:15	
Toluene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:15	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:15	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/19/23 13:06	10/19/23 22:15	
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/19/23 13:06	10/19/23 22:15	
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		10/19/23 13:06	10/19/23 22:15	

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130	10/19/23 13:06	10/19/23 22:15	1
1,4-Difluorobenzene (Surr)	86		70 - 130	10/19/23 13:06	10/19/23 22:15	1

Lab Sample ID: LCS 880-65043/1-A

Matrix: Solid

Analysis Batch: 65025

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 65043

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09647		mg/Kg		96	70 - 130	
Toluene	0.100	0.09660		mg/Kg		97	70 - 130	
Ethylbenzene	0.100	0.1011		mg/Kg		101	70 - 130	
m-Xylene & p-Xylene	0.200	0.2215		mg/Kg		111	70 - 130	
o-Xvlene	0.100	0.1225		ma/Ka		123	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	126	70 - 130
1.4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: LCSD 880-65043/2-A

Matrix: Solid

Analysis Batch: 65025

Client Sample	ID: Lab Control	Sample Dup
	Danie To	T-4-1/NIA

Prep Type: Total/NA

Prep Batch: 65043

	Spike	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1038	mg/Kg		104	70 - 130	7	35

QC Sample Results

Client: Ensolum Job ID: 890-5473-1 SDG: 03C1558090 Project/Site: JRU 108H

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

Lab Sample ID: LCSD 880-65043/2-A **Matrix: Solid**

Analysis Batch: 65025

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 65043

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.1051		mg/Kg		105	70 - 130	8	35
Ethylbenzene	0.100	0.1105		mg/Kg		110	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2397		mg/Kg		120	70 - 130	8	35
o-Xylene	0.100	0.1260		mg/Kg		126	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery (Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 890-5473-1 MS

Matrix: Solid

Analysis Batch: 65025

Client Sample ID: SW09A Prep Type: Total/NA

Prep Batch: 65043

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0996	0.09411		mg/Kg		94	70 - 130	
Toluene	<0.00200	U	0.0996	0.09123		mg/Kg		92	70 - 130	
Ethylbenzene	<0.00200	U	0.0996	0.09820		mg/Kg		99	70 - 130	
m-Xylene & p-Xylene	<0.00399	U	0.199	0.2086		mg/Kg		105	70 - 130	
o-Xylene	<0.00200	U	0.0996	0.1075		mg/Kg		108	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-5473-1 MSD

Matrix: Solid

Analysis Batch: 65025

Client Sample ID: SW09A

Prep Type: Total/NA

Prep Batch: 65043

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.100	0.09236		mg/Kg		92	70 - 130	2	35
Toluene	<0.00200	U	0.100	0.08705		mg/Kg		87	70 - 130	5	35
Ethylbenzene	<0.00200	U	0.100	0.09523		mg/Kg		95	70 - 130	3	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2005		mg/Kg		100	70 - 130	4	35
o-Xylene	<0.00200	U	0.100	0.1035		mg/Kg		103	70 - 130	4	35

MSD MSD

Surrogate	%Recovery	Quaimer	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

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

Lab Sample ID: MB 880-65041/1-A

Matrix: Solid

Analysis Batch: 65018

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65041

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		10/19/23 12:14	10/19/23 19:30	1
(GRO)-C6-C10								

QC Sample Results

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

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

Lab Sample ID: MB 880-65041/1-A

Matrix: Solid

Analysis Batch: 65018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 65041

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/19/23 12:14	10/19/23 19:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/19/23 12:14	10/19/23 19:30	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	198	S1+	70 - 130			10/19/23 12:14	10/19/23 19:30	1
o-Terphenyl	168	S1+	70 - 130			10/19/23 12:14	10/19/23 19:30	1

Lab Sample ID: LCS 880-65041/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 65018 Prep Batch: 65041 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 977.6 98 70 - 130 mg/Kg (GRO)-C6-C10 1000 1002 100 Diesel Range Organics (Over mg/Kg 70 - 130 C10-C28) LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 92 o-Terphenyl 87 70 - 130

Lab Sample ID: LCSD 880-65041/3-A

Matrix: Solid

Analysis Batch: 65018

Spike
LCSD LCSD
Added
Result Qualifier Unit D %Rec Limits RPD Limit

Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics		1000	927.1		mg/Kg		93	70 - 130	5	20
(GRO)-C6-C10										
Diesel Range Organics (Over		1000	987.6		mg/Kg		99	70 - 130	1	20
C10-C28)										
	ICSD ICSD									

	LUSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	74		70 - 130

Lab Sample ID: 890-5474-A-1-E MS

Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 65018 Prep Batch: 65041

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<81.0	U F1 F2	1300	1174		mg/Kg		87	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<81.0	U F1 F2	1300	1559		mg/Kg		118	70 - 130	
C10 C28)										

Diesel Range Organics (Over	<81.0 U I	F1 F2	1300	1559	mg/Kg	118	70 - 130
C10-C28)							
	MS MS	c					
	IVIS IVIS	3					
Surrogate	%Recovery Qu	ualifier L	.imits				
Surrogate 1-Chlorooctane	%Recovery Qu		<u>imits</u> '0 - 130				

Job ID: 890-5473-1 Client: Ensolum Project/Site: JRU 108H SDG: 03C1558090

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

Lab Sample ID: 890-5474-A-1-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 65018 Prep Type: Total/NA Prep Batch: 65041

Sample Sample Spike MSD MSD RPD Analyte Result Qualifier Added Result Qualifier %Rec Limits RPD Limit Unit D Gasoline Range Organics <81.0 U F1 F2 1300 116.4 F1 F2 mg/Kg 5 70 - 130 164 20 (GRO)-C6-C10 <81.0 U F1 F2 1300 <64.9 U F1 F2 70 - 130Diesel Range Organics (Over mg/Kg -0.1 194 20

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

MSD MSD %Recovery Limits Qualifier 70 - 130 120 94 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-65038/1-A Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 65042

MB MB

Result Qualifier RL Unit Analyte D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 10/19/23 12:49

Lab Sample ID: LCS 880-65038/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 65042

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 246.4 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-65038/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 65042

LCSD LCSD RPD Spike %Rec Analyte Added Qualifier Unit %Rec RPD Result Limit Chloride 250 246.9 99 90 - 110 mg/Kg 0

Lab Sample ID: 890-5473-1 MS Client Sample ID: SW09A

Matrix: Solid

Analysis Batch: 65042

Sample Sample Spike MS MS %Rec Result Qualifier Added Qualifier Analyte Result Unit %Rec Limits Chloride 251 93 90 - 110 116 350.3 mg/Kg

Lab Sample ID: 890-5473-1 MSD Client Sample ID: SW09A **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 65042

Sample Sample Spike MSD MSD %Rec RPD Qualifier Added Result Result Qualifier %Rec Limits RPD Limit Analyte Unit D 251 93 Chloride 116 350.5 90 - 110 20 mg/Kg 0

Eurofins Carlsbad

Prep Type: Soluble

QC Association Summary

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

GC VOA

Dro	n R	atch	. 6/	998
rie	y D	atti	. 04	1330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-64998/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 65025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Total/NA	Solid	8021B	65043
MB 880-64998/5-A	Method Blank	Total/NA	Solid	8021B	64998
MB 880-65043/5-A	Method Blank	Total/NA	Solid	8021B	65043
LCS 880-65043/1-A	Lab Control Sample	Total/NA	Solid	8021B	65043
LCSD 880-65043/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	65043
890-5473-1 MS	SW09A	Total/NA	Solid	8021B	65043
890-5473-1 MSD	SW09A	Total/NA	Solid	8021B	65043

Prep Batch: 65043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Total/NA	Solid	5035	_
MB 880-65043/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-65043/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-65043/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5473-1 MS	SW09A	Total/NA	Solid	5035	
890-5473-1 MSD	SW09A	Total/NA	Solid	5035	

Analysis Batch: 65197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 65018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Total/NA	Solid	8015B NM	65041
MB 880-65041/1-A	Method Blank	Total/NA	Solid	8015B NM	65041
LCS 880-65041/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	65041
LCSD 880-65041/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	65041
890-5474-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	65041
890-5474-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	65041

Prep Batch: 65041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Total/NA	Solid	8015NM Prep	
MB 880-65041/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-65041/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-65041/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5474-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5474-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 65140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

HPLC/IC

Leach Batch: 65038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Soluble	Solid	DI Leach	
MB 880-65038/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-65038/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-65038/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5473-1 MS	SW09A	Soluble	Solid	DI Leach	
890-5473-1 MSD	SW09A	Soluble	Solid	DI Leach	

Analysis Batch: 65042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5473-1	SW09A	Soluble	Solid	300.0	65038
MB 880-65038/1-A	Method Blank	Soluble	Solid	300.0	65038
LCS 880-65038/2-A	Lab Control Sample	Soluble	Solid	300.0	65038
LCSD 880-65038/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	65038
890-5473-1 MS	SW09A	Soluble	Solid	300.0	65038
890-5473-1 MSD	SW09A	Soluble	Solid	300.0	65038

3

5

7

8

4.0

11

Lab Chronicle

Client: Ensolum Job ID: 890-5473-1 Project/Site: JRU 108H SDG: 03C1558090

Client Sample ID: SW09A

Lab Sample ID: 890-5473-1 Date Collected: 10/17/23 01:15

Matrix: Solid

Date Received: 10/17/23 15:13

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65043	10/19/23 13:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65025	10/19/23 22:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			65197	10/19/23 22:37	SM	EET MID
Total/NA	Analysis	8015 NM		1			65140	10/20/23 02:53	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	65041	10/19/23 12:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65018	10/20/23 02:53	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	65038	10/19/23 10:48	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65042	10/19/23 13:06	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

Laboratory: Eurofins Midland

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

Authority	Progra	am	Identification Number	Expiration Date
Texas	NELA	Р	T104704400-23-26	06-30-24
,	are included in this report, bu	it the laboratory is not certif	fied by the governing authority. This lis	t may include analytes
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
Total BTEX		Solid	Total BTEX	

3

+

6

7

9

10

12

Method Summary

 Client: Ensolum
 Job ID: 890-5473-1

 Project/Site: JRU 108H
 SDG: 03C1558090

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

1

3

4

6

9

10

10

Sample Summary

Client: Ensolum

Project/Site: JRU 108H

Job ID: 890-5473-1

SDG: 03C1558090

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5473-1	SW09A	Solid	10/17/23 01:15	10/17/23 15:13	0'-6'

3

Λ

5

R

9

4 4

12

eurofins

Environment Testing Houston Midtand, T ork Order No:

Cildill of Custous	
1, TX (281) 240-4200, Dallas, TX (214) 902-0300	
X (432) 704-5440, San Antonio, TX (210) 509-3334	Wo
, TX (915) 585-3443, Lubbock, TX (806) 794-1296	
чМ (575) 392-7550, Carlsbad, NM (575) 988-3199	

		1001			1		CAMPA
			<		7		7
Relinquished by: (Signature) Received by: (Signature) Date/Time	Relinquished	Date∕Time	ature)	Received by: (Signature)	(Repe	Relinquished by: (Signature)	Relinquished I
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It as 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 dutof for Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$8 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will	nt company to Eurofins r any losses or expens uple submitted to Euro	urchase order from clier ime any responsibility fo harge of \$5 for each sam	onstitutes a valid p and shall not assu ch project and a c	inquishment of samples c nly for the cost of samples 185.00 will be applied to ea	is document and rel anco will be liable or ninimum charge of \$	e: Signature of thi r∨ice. Eurofins Xe rofins Xenco. A n
Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn Pb Mn Mo Ni Se Ag Tl U Hg: 1631/245.1/7470/7471	B Cd Ca Cr Co 3e Cd Cr Co Cu	Al Sb As Ba Be CRA Sb As Ba E	13PPM Texas 11 A .P / SPLP 6010: 8RCF	8RCRA 13F	200.8 / 6020: al(s) to be analyzed	\Set	Total 200.7 / 6010 rcle Method(s) and I
	1						
		/					
		7.3					
		/					
AFE:							
1139071001				/			
Cost Center:					/		
nAPP2217931599					1		
Incident ID:			0-6 0	51:15	5 10/17/23	ACCU12+	2
Sample Comments	втех (CHLOF	Depth Grab/	Time d Sampled	Matrix Sampled	Sample Identification	Sample Ide
NaOH+Ascorbic Acid: SAPC	8021		ري پ	Corrected Temperature:			Total Containers:
Zn Acetate+NaOH: Zn)	G (EP	1.4	Temperature Reading:	AIN	Yes	Sample Custody Seals:
.a ₂ S ₂ O ₃ : NaSO ₃			-0.2	Factor:	NIA	Yes	Cooler Custody Seals:
890-5473 Chain of Custody aHSO ₄ : NABIS		3000	-2. 1	eter ID:	Thermo	7	Samples Received Intact:
₃PO4: HP			Yes No	o Wet ice:	Temp Blank: Yes No		SAMPLE RECEIPT
₂ SO ₄ : H ₂ NaOH: Na		rs	the lab, if received by 4:30pm	the lab, if I)		PO#.
CL: HC HNO3: HN			the day received by	TAT starts	Connor Whitman	Co	Sampler's Name:
Dol: Cool MeOH: Me		_	24H	Due Date:			Project Location:
None: NO DI Water: H ₂ O		Code	✓ Rush	Routine	03C1558090	0	Project Number:
ANALYSIS REQUEST Preservative Codes	ANA		Turn Around	Tu	JRU 108H		Project Name:
Deliverables: EDD		ExxonMobil.com	Email: Garrett.Green@ExxonMobil.com	Ema	16	303-887-2946	Phone:
Level III PST/UST	A 88220	Carlsbad, NM 88220	City, State ZIP:		M 88220	Carlsbad, NM 88220	City, State ZIP:
	en St.	3104 E. Green St	Address:		3122 National Parks Hwy	3122 Nation	Address:
Program: UST/PST PRP Brownfields RRC Superfund		XTO Energy	Company Name:			Ensolum	Company Name:
Work Order Comments	7	Garrett Green	Bill to: (if different)			Ben Belill	Project Manager:

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-5473-1

 SDG Number: 03C1558090

Login Number: 5473 List Source: Eurofins Carlsbad

List Number: 1

Creator: Bruns, Shannon

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

2

3

4

6

8

10

12

13

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5473-1 SDG Number: 03C1558090

Login Number: 5473

List Source: Eurofins Midland
List Number: 2

List Creation: 10/19/23 10:38 AM

Creator: Rodriguez, Leticia

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

4

2

7

9

11

4.0

14

<6mm (1/4").

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

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

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

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

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

CONDITIONS

Action 279353

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	279353
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	