

March 14, 2023

#### **New Mexico Oil Conservation Division**

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

Re: Closure Request

**Dominator 25 Federal CTB** 

**Incident Number NAPP2236337962** 

Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request* to document initial assessment, remediation, and soil sampling activities performed at the Dominator 25 Federal CTB (Site; Figure 1). The purpose of the soil sampling activities was to assess for the presence or absence of impacted soil following a release of produced water. Based on Site assessment, excavation activities, and laboratory analytical results, COG is requesting closure for Incident Number NAPP2236337962.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit M, Section 25, Township 25 South, Range 33 East, in Lea County, New Mexico (32.0951°, -103.5314°) and is associated with oil and gas exploration and production operations on federally owned surface managed by the Bureau of Land Management (BLM).

On December 16, 2022, an open valve on a water truck caused a release of approximately 5.04 barrels (bbls) of produced water onto the pad surface. The water truck that caused the release recovered approximately 5 bbls of free-standing fluids. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141; Appendix A) on December 29, 2022. The release was assigned Incident Number NAPP2236337962.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess 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 (Appendix A). Potential Site receptors are identified on Figure 1.

Based on a desktop review of regional hydrogeologic data, depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest available groundwater well data. The closest permitted groundwater well with depth to groundwater data is

New Mexico Office the State Engineer (NMOSE) permitted well C-02313, located approximately 5,273 feet west of the Site. The groundwater well has a reported depth to groundwater of 110 feet bgs. Ground surface elevation at the groundwater well location is 3,323 feet above mean sea level (amsl), which is approximately 17 feet lower in elevation than the Site. Nearby water wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix B.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 14,277 feet north of the Site. In addition, an emergent wetland is located approximately 3,690 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

#### INITIAL SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On December 28, 2022, Ensolum evaluated the release based on information provided on the Form C-141 and visual observations. Onsite personnel documented the release and mapped the release extent (Figure 2). Ensolum collected preliminary soil samples SS01 through SS05 within and around the observed release area in each cardinal direction from a depth of approximately 0.5 feet bgs. Soil sample SS01 was collected within the release extent to characterize surficial soil. Soil samples SS02 through SS05 were collected outside the release extent to assess the lateral extent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during the Site visit. A photographic log is included in Appendix C.

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 chemicals 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.



Page 3

Laboratory analytical results for soil sample SS01 indicated all COC concentrations were compliant with the Site Closure Criteria. Due to staining within the release area, additional remediation efforts appeared warranted. Laboratory analytical results for soil samples SS02 through SS05 indicated all COCs were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. As such, excavation within the release extent appeared warranted to remove surficial staining.

#### **EXCAVATION ACTIVITIES**

On January 11, 2023, Ensolum oversaw the excavation of waste-containing soil from the release extent as indicated by visible staining and laboratory analytical results from preliminary soil sample SS01. Excavation activities were performed via back-hoe to depths ranging from 0.5-feet to 1-foot bgs. To direct excavation activities, soil was field screened for VOCs and chloride as described above. Photographic documentation of excavation activities is included in Appendix C.

Following removal of stained soil, 5-point composite soil samples were collected every 200 square feet from the excavation floor. Due to the shallow depth of the excavation, soil from the sidewalls were incorporated into the floor samples. Excavation composite soil samples FS01 through FS03 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 handled and analyzed as previously described. The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 3.

The total areal extent of the excavation was approximately 600 square feet. A total of approximately 15 cubic yards of soil were removed during the excavation, transported, and properly disposed of at R360 Environmental Solutions in Hobbs, New Mexico.

#### LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for excavation confirmation soil samples FS01 through FS03 indicated all COC concentrations were compliant with the Site Closure Criteria and the most stringent Table I Closure Criteria, confirming waste-containing soil was properly removed. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

#### **CLOSURE REQUEST**

Based on laboratory analytical results for final excavation confirmation soil samples FS01 through FS03, excavation activities have removed residual produced water at the Site. Soil samples SS02 through SS05, collected outside the release extent, provide additional evidence produced water did not migrate beyond the visually observed release extent. COG believes these remedial actions have been protective of human health, the environment, and groundwater. As such, COG respectfully requests closure for Incident Number NAPP2236337962. The Final C-141 is included in Appendix A.



If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or kjennings@ensolum.com.

Sincerely, **Ensolum, LLC** 

Josh Adams, PG Project Geologist Daniel R. Moir, PG Senior Managing Geologist

cc: Charles Beauvais, COG Operating, LLC

**Bureau of Land Management** 

#### Attachments:

Figure 1 Site Location Map

Figure 2 Preliminary Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results

Appendix A Final C-141

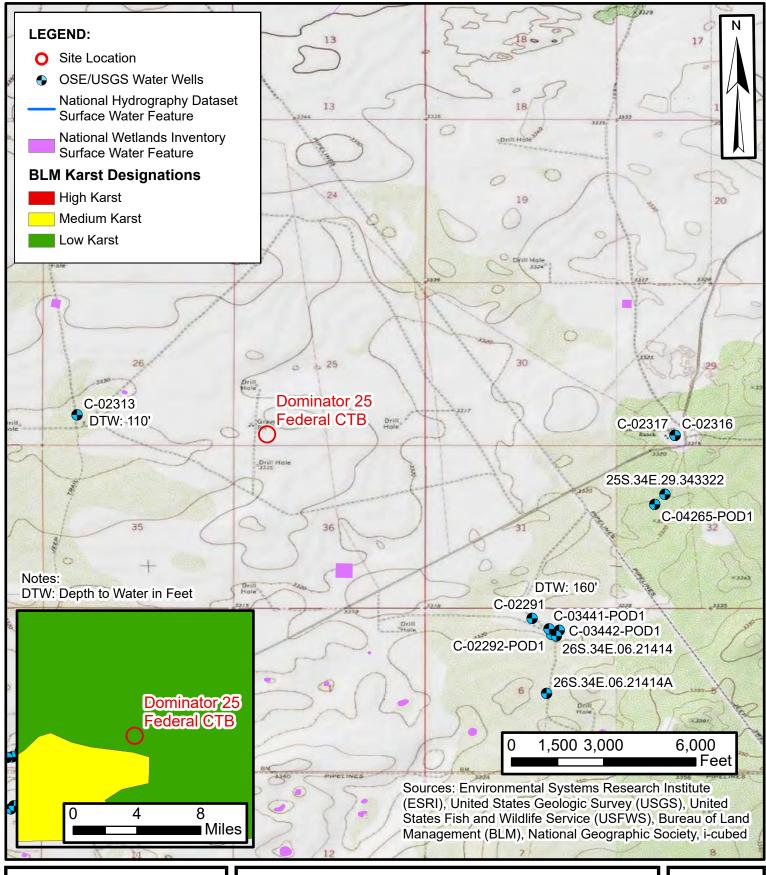
Appendix B Referenced Well Records

Appendix C Photographic Log

Appendix D Laboratory Analytical Reports



**FIGURES** 





## SITE LOCATION MAP

COG Operating, LLC Dominator 25 Federal CTB

Incident Number: NAPP2236337962 Unit M, Sec 25, T25S, R33E Lea County, New Mexico FIGURE

1

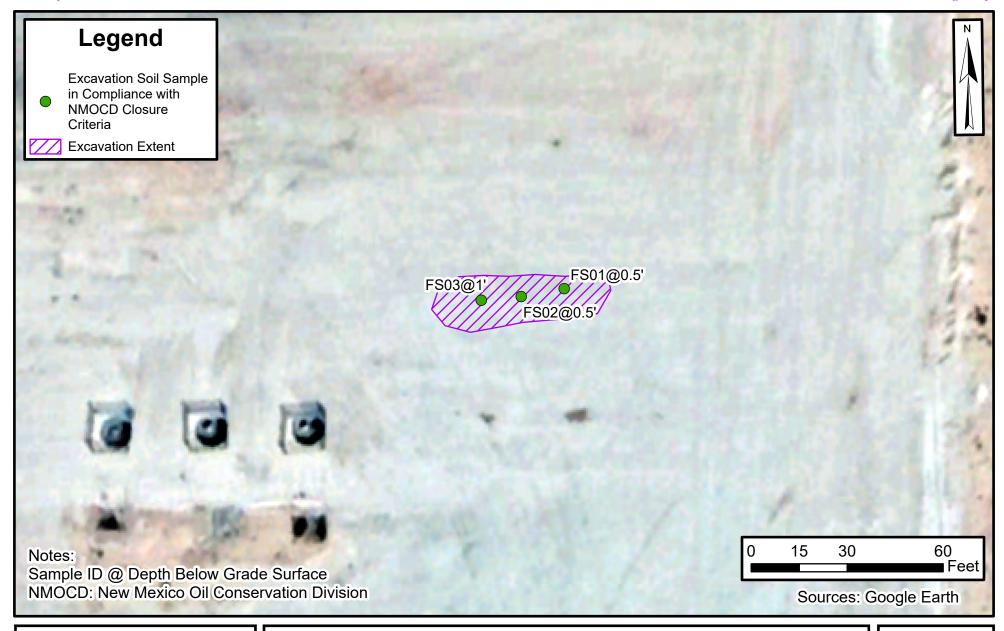




# **Preliminary Soil Sample Locations**

COG Operating, LLC Dominator 25 Federal CTB

Incident Number: NAPP2236337962 Unit M, Sec 25, T25S, R33E Lea County, New Mexico FIGURE





# **Excavation Soil Samples**

COG Operating, LLC Dominator 25 Federal CTB

Incident Number: NAPP2236337962 Unit M, Sec 25, T25S, R33E Lea County, New Mexico FIGURE 3



**TABLE** 

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# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS

Dominator Fed 25 Pad 1 COG Operating, LLC Lea County, New Mexico

	Lea County, New Mexico									
Sample Designation	Date	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 (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
	Preliminary Assessment Soil Samples									
SS01	12/28/2022	0.5	<0.00200	< 0.00399	<49.9	140	<49.9	140	140	4,520
SS02	12/28/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	55.1
SS03	12/28/2022	0.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	56.6
SS04	12/28/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	33.4
SS05	12/28/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	44.5
	Excavation Soil Samples									
FS01	1/11/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	221
FS02	1/11/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	229
FS03	1/11/2023	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	235

#### Notes:

bgs: below ground surface mg/kg: milligrams per kilogram

NMAC: New Mexico Adminstrative Code

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

TPH: Total Petroleum Hydrocarbon

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

Grey text represents samples that have been excavated



**APPENDIX A** 

Final C141

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	
District RP	
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible Party					OGRID			
Contact Nam	ie			Contact	Telephone			
Contact emai	Contact email				Incident # (assigned by OCD)			
Contact mail	ing address			<b>'</b>				
					~			
			Location	of Release	Source			
Latitude				Longitud	e			
			(NAD 83 in dec	cimal degrees to 5 de	ecimal places)			
Site Name				Site Typ	e			
Date Release	Discovered			API# (if	applicable)			
Unit Letter	Section	Township	Range	Co	ounty			
Ont Letter	Section	Township	Runge		, unity	-		
						_		
Surface Owner	r: State	☐ Federal ☐ Tr	ribal Private (I	Name:		)		
			Nature and	d Volume o	f Release			
Crude Oil		l(s) Released (Select al Volume Release		calculations or spec	Volume Reco	e volumes provided below) overed (bbls)		
Produced	Water	Volume Release	` ,			Volume Recovered (bbls)		
			ion of dissolved c	chloride in the		☐ Yes ☐ No		
		produced water						
Condensa	te	Volume Release	d (bbls)		Volume Reco	overed (bbls)		
Natural G	as	Volume Release	d (Mcf)		Volume Reco	Volume Recovered (Mcf)		
Other (des	Other (describe) Volume/Weight Released (provide units			e units)	Volume/Weight Recovered (provide units)			
Cause of Rele	ease							

Received by OCD: 3/14/2023 8:27:23 PMM State of New Mexico Page 2 Oil Conservation Division

				-		40
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	_ 0					,

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the respo	nsible party consider this a major release?
19.15.29.7(A) NMAC?		
☐ Yes ☐ No		
If VFS, was immediate no	otice given to the OCD? By whom? To w	nom? When and by what means (phone, email, etc)?
11 1L5, was ininediate in	since given to the OCD. By whom: 10 wi	when and by what means (phone, eman, etc).
	Initial R	esponse
The responsible p	party must undertake the following actions immediate	ly unless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
	s been secured to protect human health and	the environment.
Released materials ha	we been contained via the use of berms or	likes, absorbent pads, or other containment devices.
	ecoverable materials have been removed an	
If all the actions described	d above have <u>not</u> been undertaken, explain	why:
Dar 10 15 20 8 P. (4) NM	AC the responsible party may commence t	emediation immediately after discovery of a release. If remediation
has begun, please attach	a narrative of actions to date. If remedial	efforts have been successfully completed or if the release occurred blease attach all information needed for closure evaluation.
regulations all operators are public health or the environment failed to adequately investigation	required to report and/or file certain release not ment. The acceptance of a C-141 report by the Cate and remediate contamination that pose a thro	best of my knowledge and understand that pursuant to OCD rules and fications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
Printed Name		Title:
Signature:	tanigaparinge	Date:
email:		Telephone:
OCD Only		
Received by:	Harimon	Date: _12/29/2022

Received by OCD: 3/1/4/2023 8:127:23 IBM M					Spill Calculation - Subsurface Spill - Rectang Page 44 of 499			
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth	On/Off Pad	Soil Spilled-Fluid Saturation	Estimated volume of each area	Total Estimated Volume of Spill	

(%.)

10.50%

(bbl.)

0.37

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

Total Subsurface Volume Released:

(bbl.)

0.04

0.0389

(dropdown)

On-Pad~

V

V

V

V

V

V

V

V

V

(in.)

0.1

25.0

8.0

Rectangle A

Rectangle B

Rectangle C

Rectangle D

Rectangle E

Rectangle F

Rectangle G

Rectangle H

Rectangle I

Rectangle J

Released to Imaging: 3/22/2023/10:022t05/AM1

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 171036

#### **CONDITIONS**

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	171036
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
jharimon	None	12/29/2022

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NAPP2236337962 Incident ID District RP Facility ID Application ID

#### **Site Assessment/Characterization**

This information must be provided to the appropriate district office no taler than 20 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 X No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes 🗓 No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes 🏻 No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vercontamination 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.	
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wel</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> </ul>	ls.

Characterization Report Checklist: Eq.	ch of the following items must be included in the report.
Character Eation Report Checknist: Ea	en of the following wents must be metaded in the report.
Scaled site map showing impacted are	ea, surface features, subsurface features, delineation points, and monitoring wells.
	za, surface features, subsurface features, defineation points, and monitoring wens.
Field data	
Data table of soil contaminant concer	tration data
Depth to water determination	
Determination of water sources and s	gnificant watercourses within ½-mile of the lateral extents of the release
Boring or excavation logs	
Photographs including date and GIS i	nformation
☐ Topographic/Aerial maps	
☐ Laboratory data including chain of cu	stody

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

Received by OCD: 3/14/2023 8:27:23 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

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Incident ID	NAPP2236337962	
District RP		
Facility ID		
Application ID		

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release no public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	tifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have reat to groundwater, surface water, human health or the environment. In
Printed Name:Charles Beauvais	Title:Senior Environmental Engineer
Signature: Charles R. Beauvais 99	Date: 3/14/2023
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043
OCD Only	
Received by: Jocelyn Harimon	Date:03/15/2023

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Incident ID	NAPP2236337962
District RP	
Facility ID	
Application ID	

## Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.	
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD Distributed 2 days prior to liner inspection)	ict office
☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)	
□ Description of remediation activities	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to Coand regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liabil should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface whuman health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantial restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.  Printed Name:	which lity water,
Signature:	
email: Charles.R.Beauvais@conocophillips.com Telephone:575-988-2043	
OCD Only	
Received by: Date: Date:	
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately invest remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the reparty of compliance with any other federal, state, or local laws and/or regulations.	
Closure Approved by:	
Printed Name: Title: Title:Environmental Specialist A	



**APPENDIX B** 

Referenced Well Records



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number** 

Q64 Q16 Q4 Sec Tws Rng

C 02313

3 26 25S 33E

636971

3552098\*

**Driller License:** 

**Driller Company:** 

**Driller Name:** 

**UNKNOWN** 

**Drill Start Date:** 

01/01/1925

**Drill Finish Date:** 

06/30/1925

**Plug Date:** 

Log File Date:

**PCW Rcv Date:** 

Source:

**Pump Type:** 

Pipe Discharge Size:

**Estimated Yield:** 60 GPM

**Casing Size:** 

6.88

Depth Well:

150 feet

**Depth Water:** 

110 feet

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/11/23 7:47 AM

POINT OF DIVERSION SUMMARY

Received by OCD: 3/14/2023 8:27:23 PM

<sup>\*</sup>UTM location was derived from PLSS - see Help

**USGS Home Contact USGS** Search USGS

**National Water Information System: Web Interface** 

**USGS** Water Resources

Geographic Area: Data Category: United States GO Groundwater

Click to hideNews Bulletins

• See the Water Data for the Nation Blog for the latest news and updates.

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs site\_no list =

• 320419103302201

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 320419103302201 26S.34E.06.21414

Lea County, New Mexico Latitude 32°04'37.9", Longitude 103°30'20.5" NAD83 Land-surface elevation 3,319.00 feet above NGVD29 The depth of the well is 360 feet below land surface. This well is completed in the Other aquifers (N9999OTHER) national aquifer. This well is completed in the Chinle Formation (231CHNL) local aquifer.

#### **Output formats**

1					<u>'</u>	output ioiiiia	15				
Table of da	<u>ta</u>										
Tab-separa	ted data										
Graph of da	ata_										
Reselect pe	riod	-	-								
Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water- level approval status

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Date	Time	Water- level date- time accuracy	? Parameter code	level, feet below land surface	level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	Water- level approval status
L971-10-20		D	62611		3192.15	NAVD88	1	Z			
L981-03-25		D	62610		3189.57	NGVD29	1	Z			
981-03-25		D	62611		3191.15	NAVD88	1	Z			
981-03-25		D	72019	129.43			1	Z			
986-03-04		D	62610		3193.12	NGVD29	1	Z			
986-03-04		D	62611		3194.70	NAVD88	1	Z			
986-03-04		D	72019	125.88			1	Z			
991-06-12		D	62610		3192.18	NGVD29	1	Z			
991-06-12		D	62611		3193.76	NAVD88	1	Z			
991-06-12		D	72019	126.82			1	Z			
013-01-16	21:00 UTC	m	62610		3142.19	NGVD29	1	S	USGS	;	5
013-01-16	21:00 UTC	m	62611		3143.77	NAVD88	1	S	USGS	3	5
.013-01-16	21:00 UTC	m	72019	176.81			1	S	USGS	3	5

#### Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.

Section	Code	Description
Water-level approval status	Α	Approved for publication Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
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U.S. Department of the Interior | U.S. Geological Survey

**Title: Groundwater for USA: Water Levels** 

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

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

Page Last Modified: 2023-01-11 09:41:41 EST

0.29 0.24 nadww02





**APPENDIX C** 

Photographic Log



Photographic Log COG Operating, LLC Dominator 25 Federal CTB NAPP2236337962





Photograph 1
Description: Initial Release

View: East

Date:12/28/2022

Photograph 2

Date: 1/11/2023

Description: Completed Excavation

View: Southeast



Photograph 3 Date: 1/11/2023 Description: Completed Excavation

View: South



Photograph 4 Date: 1/11/2023

Description: Completed Excavation

View: Northwest



APPENDIX D

Laboratory Analytical Reports

**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Josh Adams Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 1/6/2023 12:32:42 PM

**JOB DESCRIPTION** 

DOMINATOR FED 25 PAD 1 SDG NUMBER 03D2024136

**JOB NUMBER** 

890-3733-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

## **Eurofins Carlsbad**

#### **Job Notes**

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

### **Authorization**

Generated 1/6/2023 12:32:42 PM

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

Client: Ensolum
Project/Site: DOMINATOR FED 25 PAD 1

Laboratory Job ID: 890-3733-1 SDG: 03D2024136

# **Table of Contents**

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#### **Definitions/Glossary**

Job ID: 890-3733-1 Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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" 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

**Eurofins Carlsbad** 

#### Case Narrative

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3733-1

SDG: 03D2024136

Job ID: 890-3733-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3733-1

#### Receipt

The sample was received on 12/30/2022 9:30 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 1.0°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS01 (890-3733-1).

#### **GC VOA**

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

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (890-3757-A-1-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: SS01 (890-3733-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43077 and analytical batch 880-43285 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.

Matrix: Solid

Lab Sample ID: 890-3733-1

#### **Client Sample Results**

Client: Ensolum Job ID: 890-3733-1

Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

**Client Sample ID: SS01** Date Collected: 12/28/22 10:30

Date Received: 12/30/22 09:30

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 19:44	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 19:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 19:44	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/04/23 08:41	01/04/23 19:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 19:44	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/04/23 08:41	01/04/23 19:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/04/23 08:41	01/04/23 19:44	1
1,4-Difluorobenzene (Surr)	108		70 - 130			01/04/23 08:41	01/04/23 19:44	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			01/05/23 10:15	1
	•		•	11-14	_	Danagad	Austral	D!! F
Analyte	Result	ics (DRO) ( Qualifier	RL	Unit ma/Ka	<u>D</u>	Prepared	Analyzed 01/06/23 13:03	
Analyte Total TPH	Result 140	Qualifier	<b>RL</b> 49.9	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared	Analyzed 01/06/23 13:03	
Analyte Total TPH  Method: SW846 8015B NM - Dies	Result 140 sel Range Orga	Qualifier nics (DRO)	RL 49.9	mg/Kg		<u> </u>	01/06/23 13:03	1
Analyte Total TPH  Method: SW846 8015B NM - Dies Analyte	Result 140 sel Range Orga	Qualifier  nics (DRO)  Qualifier	RL 49.9 (GC)	mg/Kg	<u>D</u>	Prepared	01/06/23 13:03  Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result 140 sel Range Orga	Qualifier  nics (DRO)  Qualifier	RL 49.9	mg/Kg		<u> </u>	01/06/23 13:03	Dil Fac
Analyte Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 140 sel Range Orga	Qualifier  nics (DRO)  Qualifier	RL 49.9 (GC)	mg/Kg		Prepared	01/06/23 13:03  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 140 sel Range Orga Result <a href="#">&lt;49.9</a>	Qualifier  nics (DRO)  Qualifier  U	(GC) RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 01/05/23 11:23	01/06/23 13:03  Analyzed  01/06/23 01:30	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)	Result 140  sel Range Orga	Qualifier  nics (DRO) Qualifier  U	RL 49.9  (GC)  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/05/23 11:23 01/05/23 11:23	01/06/23 13:03  Analyzed  01/06/23 01:30  01/06/23 01:30	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)	Result 140  sel Range Orga	Qualifier  nics (DRO) Qualifier  U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/05/23 11:23 01/05/23 11:23	01/06/23 13:03  Analyzed 01/06/23 01:30  01/06/23 01:30  01/06/23 01:30	Dil Face
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   140	Qualifier  nics (DRO) Qualifier  U	RL 49.9 (GC) RL 49.9 49.9 Limits	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/05/23 11:23 01/05/23 11:23 01/05/23 11:23 Prepared	Analyzed 01/06/23 01:30 01/06/23 01:30 01/06/23 01:30 Analyzed	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 1-Chlorooctane o-Terphenyl	Result   140	Qualifier  nics (DRO) Qualifier  U  Qualifier S1+	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/05/23 11:23 01/05/23 11:23 01/05/23 11:23  Prepared 01/05/23 11:23	01/06/23 13:03  Analyzed 01/06/23 01:30  01/06/23 01:30  Analyzed 01/06/23 01:30	Dil Fac
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  nics (DRO) Qualifier  U  Qualifier S1+	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/05/23 11:23 01/05/23 11:23 01/05/23 11:23  Prepared 01/05/23 11:23	01/06/23 13:03  Analyzed 01/06/23 01:30  01/06/23 01:30  Analyzed 01/06/23 01:30	Dil Fac

**Eurofins Carlsbad** 

### **Surrogate Summary**

Client: Ensolum Job ID: 890-3733-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-				Percent Surrogate Rec
		BFB1	DFBZ1	· ·
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-23150-A-21-G MS	Matrix Spike	100	109	
880-23150-A-21-H MSD	Matrix Spike Duplicate	99	107	
890-3733-1	SS01	111	108	
LCS 880-43114/1-A	Lab Control Sample	103	110	
LCSD 880-43114/2-A	Lab Control Sample Dup	96	105	
MB 880-43114/5-A	Method Blank	97	107	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			
DFBZ = 1,4-Difluorobenz	ene (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)	
890-3733-1	SS01	138 S1+	126	
890-3757-A-1-C MS	Matrix Spike	112	85	
890-3757-A-1-D MSD	Matrix Spike Duplicate	114	88	
LCS 880-43251/2-A	Lab Control Sample	104	98	
LCSD 880-43251/3-A	Lab Control Sample Dup	118	110	
MB 880-43251/1-A	Method Blank	113	109	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Project/Site: DOMINATOR FED 25 PAD 1

Client: Ensolum

Job ID: 890-3733-1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43114/5-A

**Matrix: Solid** Analysis Batch: 43117

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43114

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepare	ed	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	01/04/23 0	08:41	01/04/23 12:40	1
1,4-Difluorobenzene (Surr)	107		70 - 130	01/04/23 0	08:41	01/04/23 12:40	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 43114

Analysis Batch: 43117

**Matrix: Solid** 

Lab Sample ID: LCS 880-43114/1-A

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.1023 mg/Kg 102 70 - 130 Toluene 0.100 0.09910 mg/Kg 99 70 - 130 0.100 0.09831 Ethylbenzene mg/Kg 98 70 - 130 0.200 0.2028 101 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.09740 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery Qua	lifier Limits	
4-Bromofluorobenzene (Surr)	103	70 - 130	
1,4-Difluorobenzene (Surr)	110	70 - 130	

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

**Matrix: Solid** 

Analysis Batch: 43117

Lab Sample ID: LCSD 880-43114/2-A

Prep Type: Total/NA Prep Batch: 43114

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08858		mg/Kg		89	70 - 130	14	35	
Toluene	0.100	0.08677		mg/Kg		87	70 - 130	13	35	
Ethylbenzene	0.100	0.08671		mg/Kg		87	70 - 130	13	35	
m-Xylene & p-Xylene	0.200	0.1795		mg/Kg		90	70 - 130	12	35	
o-Xylene	0.100	0.08715		mg/Kg		87	70 - 130	11	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1.4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-23150-A-21-G MS

**Matrix: Solid** 

Analysis Batch: 43117

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

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09062		mg/Kg		90	70 - 130	
Toluene	<0.00201	U	0.101	0.08564		mg/Kg		85	70 - 130	

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Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 43251

Client Sample ID: Matrix Spike Duplicate

Prep Batch: 43114

#### **QC Sample Results**

Client: Ensolum Job ID: 890-3733-1 SDG: 03D2024136 Project/Site: DOMINATOR FED 25 PAD 1

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

Lab Sample ID: 880-23150-A-21-G MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

Analysis Batch: 43117

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.101	0.08624		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1768		mg/Kg		88	70 - 130	
o-Xylene	<0.00201	U	0.101	0.08556		mg/Kg		85	70 - 130	

MS MS

Surrogate	%Recovery Qualifi	er Limits
4-Bromofluorobenzene (Surr)	100	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

Lab Sample ID: 880-23150-A-21-H MSD

**Matrix: Solid** 

ı	Analysis Batch: 43117									Prep	Batch:	43114
		Sample	Sample	Spike	MSD	MSD				%Rec		RPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Benzene	<0.00201	U	0.0996	0.08738		mg/Kg		88	70 - 130	4	35
	Toluene	<0.00201	U	0.0996	0.08362		mg/Kg		84	70 - 130	2	35
	Ethylbenzene	<0.00201	U	0.0996	0.08437		mg/Kg		85	70 - 130	2	35
	m-Xylene & p-Xylene	<0.00402	U	0.199	0.1737		mg/Kg		87	70 - 130	2	35
	o-Xylene	<0.00201	U	0.0996	0.08400		mg/Kg		84	70 - 130	2	35
١												

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-43251/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 43191

	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		01/05/23 11:23	01/05/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	01/05/23 11:23	01/05/23 19:47	1
o-Terphenyl	109		70 - 130	01/05/23 11:23	01/05/23 19:47	1

Lab Sample ID: LCS 880-43251/2-A

Matrix: Solid							Prep Iy	pe: lotal/NA
Analysis Batch: 43191						Prep Batch: 43251		
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	978.5		mg/Kg		98	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	924.6		mg/Kg		92	70 - 130	
C10-C28)								

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**Client Sample ID: Lab Control Sample** 

C10-C28)

Job ID: 890-3733-1

Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

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

Lab Sample ID: LCS 880-43251/2-A Client Sample ID: Lab Control Sample

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 43191 Prep Batch: 43251

LCS LCS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 104 70 - 130 o-Terphenyl 98 70 - 130

Lab Sample ID: LCSD 880-43251/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 43191 Prep Batch: 43251

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 1009 101 70 - 1303 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 999.4 100 mg/Kg 70 - 13020 8

LCSD LCSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 118 110 70 - 130 o-Terphenyl

Lab Sample ID: 890-3757-A-1-C MS Client Sample ID: Matrix Spike

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 43191 Prep Batch: 43251

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

Gasoline Range Organics <49.9 U 999 750.7 mg/Kg 70 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 885.9 mg/Kg 87 70 - 130 C10-C28)

MS MS Surrogate %Recovery Qualifier Limits

70 - 130 1-Chlorooctane 112 70 - 130 o-Terphenyl 85

Lab Sample ID: 890-3757-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

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

Analysis Batch: 43191 Prep Batch: 43251 Camania Camania Cmile.

	Sample	Sample	<b>эріке</b>	Man	MOD				%Rec		KPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<49.9	U	999	826.1		mg/Kg		78	70 - 130	10	20	
(GRO)-C6-C10												
Diesel Range Organics (Over	<49.9	U	999	913.9		mg/Kg		90	70 - 130	3	20	
C10-C28)												

MSD MSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 114 70 - 130 88 70 - 130 o-Terphenyl

**Eurofins Carlsbad** 

### QC Sample Results

Client: Ensolum Job ID: 890-3733-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43077/1-A

**Matrix: Solid** 

Analysis Batch: 43285

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

MB MB

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 01/06/23 08:28

Lab Sample ID: LCS 880-43077/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 43285** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 259.2 mg/Kg 104 90 - 110

Lab Sample ID: LCSD 880-43077/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 43285

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 257.6 mg/Kg 103 90 - 110

Lab Sample ID: 890-3732-A-1-E MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 43285

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier %Rec Unit Limits Chloride 55.1 F1 250 361.5 F1 123 90 - 110 mg/Kg

Lab Sample ID: 890-3732-A-1-F MSD

**Matrix: Solid** 

Analysis Batch: 43285

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 55.1 F1 250 345.7 F1 mg/Kg 116 90 - 110 20

**Eurofins Carlsbad** 

Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

### **QC Association Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3733-1

SDG: 03D2024136

### **GC VOA**

### Prep Batch: 43114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Total/NA	Solid	5035	
MB 880-43114/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 43117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Total/NA	Solid	8021B	43114
MB 880-43114/5-A	Method Blank	Total/NA	Solid	8021B	43114
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	8021B	43114
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43114
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	43114
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43114

### **Analysis Batch: 43218**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Total/NA	Solid	Total BTEX	

### **GC Semi VOA**

### Analysis Batch: 43191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Total/NA	Solid	8015B NM	43251
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015B NM	43251
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43251
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43251
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	43251
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43251

### Prep Batch: 43251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 43393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Total/NA	Solid	8015 NM	

### HPLC/IC

### Leach Batch: 43077

Released to Imaging: 3/22/2023 10:22:05 AM

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Soluble	Solid	DI Leach	
MB 880-43077/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

## **QC Association Summary**

Client: Ensolum

Job ID: 890-3733-1 Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

### HPLC/IC (Continued)

### Leach Batch: 43077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### **Analysis Batch: 43285**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3733-1	SS01	Soluble	Solid	300.0	43077
MB 880-43077/1-A	Method Blank	Soluble	Solid	300.0	43077
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	300.0	43077
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43077
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	43077
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43077

### **Lab Chronicle**

Client: Ensolum Job ID: 890-3733-1 Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

**Client Sample ID: SS01** Lab Sample ID: 890-3733-1

Date Collected: 12/28/22 10:30 Matrix: Solid Date Received: 12/30/22 09:30

	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	43114	01/04/23 08:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43117	01/04/23 19:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43218	01/05/23 10:15	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43393	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/06/23 01:30	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	43077	01/03/23 12:07	KS	EET MID
Soluble	Analysis	300.0		10			43285	01/06/23 09:17	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: 890-3733-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

### **Laboratory: Eurofins Midland**

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

Authority Texas		ogram	Identification Number	<b>Expiration Date</b>
		ELAP	T104704400-22-25	06-30-23
The following analytes the agency does not of	• •	it the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

### **Method Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3733-1

SDG: 03D2024136

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** 

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### Sample Summary

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3733-1

SDG: 03D2024136

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3733-1	SS01	Solid	12/28/22 10:30	12/30/22 09:30	0.5

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# **Chain of Custody**

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nature) Date/Time	/ Received by: (Signature)	Relinquished by: (Signature)	Relir	Date/Time	Dat	e)	Received by: (Signature)	Received	neture)	Relipquished by: (Signeture)
ed.	orced unless previously negotiate	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.	ns Xenco, but n	ted to Eurofin	mple submit	e of \$5 for each sa	oject and a charg	applied to each p	harge of \$85.00 will be	Eurofins Xenco. A minimum
	standard terms and conditions rcumstances beyond the control	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions for several 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 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	Xenco, its affilies incurred by i	y to Eurofins	ent company	hase order from cli	tutes a valid purc	of samples consti	nt and relinquishment	service Eurofins Years will I
Hg: 1631 / 245.1 / /4/0 / /4/1	Ag II U Hg: 16,	Cd Cr Co Cu Pb Mn Mo Ni Se Ag II U	e Cd Cr C	Sb As Ba Be	RA Sb	TCLP / SPLP 6010: 8RCRA	TCLP / SP	zed	tal(s) to be analy:	Circle Method(s) and Metal(s) to be analyzed
Na Sr TI Sn U V Zn	K Se A	Cr Co Cu Fe Pb Mg Mn	B Cd Ca	s Ba Be		M Texas 11	8RCRA 13PPM	87	200.8 / 6020:	Total 200.7 / 6010
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Sample Comments		<u>-</u>	BTEX	TPH (	CHLC	Depth Comp	Sampled	Sampled	ion Matrix	Sample Identification
NaCOT TO SCOTO COME. CO.	Y	890-3733 Chain of Custody	. (802				perature:	Corrected Temperature		Total Containers:
NaOH+Accorbic Acid: SADC				_	ES (1	0	Reading:	Temperature Reading:	Yes No NA	Sample Custody Seals:
Zn Acetate+NaOH: Zn						0	Clor:	Correction Factor.	No	Cooler Custody Seals:
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>					Para 4: 30		D: (V)	I hermometer IU:	(es	Samples Received Intact:
NaHSO.: NABIS							100	(69)	1	ייייי דר יירטביי
H₃PO₄: HP						Yes No	Wet Ice:	Vec No	Temp Blank	SAMPI E RECEIPT
H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na					rs	19d-by 4:30pm	the lab, if received by 4:30pm	)		PO#:
HCL: HC HNO3: HN						ay received by	TAT starts the day received by		Kase Parker	Sampler's Name:
Cool: Cool MeOH: Me							Due Date:		32.09511, -103.53140	Project Location:
None: NO DI Water: H <sub>2</sub> O					Code	Rush	Routine	6	03D2024136	Project Number:
Preservative Codes		ANALYSIS REQUEST					Turn Around	5 Pad 1	Dominator Fed 25 Pad 1	Project Name:
ADaPT U Other:	Deliverables: EDD		jadams@ensolum.com		olum.com	Email: kjennings@ensolum.com,	Email: k		303-517-8437	Phone: 303-
	Reporting: Level III   Level I	Repon	701	Midland, TX 79701	Midla	City, State ZIP:	0		Midland, TX 79701	City, State ZIP: Midla
DETAILET THE PROPERTY OF THE P	State of Project:		601 N Marienfeld St Suite 400	N Marienfe	601	Address:	Þ	lite 400	601 N Marienfeld St Suite 400	Address: 601
	Flogiani. Oshrai   Far   Glowingias   mag	riogia		Ensolum, LLC	Ensc	Company Name:	C		Ensolum, LLC	Company Name: Ensc
rownfields RRC Superfund	m: IIST/BST   PRP   Br	D			7					
Om Om	Work Orde			Kalei Jennings	Kale	Bill to: (if different)	В		Josh Adams	Project Manager: Josh
om Page of	www.xenco.com	4			(0,0)					
		EL Paso, IX (915) 585-3443, Lubbock, IX (806) / 94-1295 Hobbs NM (575) 392-7550 Carlshad NM (575) 988-3199	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlshad, NM (575) 988-3199	585-3443, L	o, IX (915)	EL Pas			VEHCO	
		Midiand, 1X (432) 704-9440, Sail Allionio, 1X (210) 909-9994	Antonio, IX	94-0440, Oal	IX (432) /	Widiand,	9		Variable	
Vo.	Work Order No:	2010) 500 3334	Houseon, 12 (201) 240-4200, Dallas, 12 (217) 302-5000	240-4200.	JII, 1 \ (201	MSHOLL I	ening	Environment Testing		Calolli
		1 000.0200	Dallas TY (2)	345 4300	TV /281				n	Purofins

Revised Date 08/25/2020 Rev. 2020.2

### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-3733-1 SDG Number: 03D2024136

Login Number: 3733 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.	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: 890-3733-1

SDG Number: 03D2024136

List Source: Eurofins Midland

Creator: Rodriguez, Leticia

Login Number: 3733

List Number: 2

List Creation: 01/03/23 09:51 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").	N/A	

Euronnis Carisbau

Released to Imaging: 3/22/2023 10:22:05 AM

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**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Josh Adams Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 1/6/2023 12:32:42 PM

**JOB DESCRIPTION** 

DOMINATOR FED 25 PAD 1 SDG NUMBER 03D2024136

**JOB NUMBER** 

890-3732-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

# **Eurofins Carlsbad**

### **Job Notes**

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

# **Authorization**

Generated 1/6/2023 12:32:42 PM

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

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

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Client: Ensolum
Project/Site: DOMINATOR FED 25 PAD 1
Laboratory Job ID: 890-3732-1
SDG: 03D2024136

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### **Definitions/Glossary**

Job ID: 890-3732-1 Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

S1-Surrogate recovery exceeds control limits, low 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

DLC Decision Level Concentration (Radiochemistry)

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

**RER** Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

**TNTC** Too Numerous To Count

### Case Narrative

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3732-1

SDG: 03D2024136

Job ID: 890-3732-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3732-1

### Receipt

The sample was received on 12/30/2022 9:30 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 1.0°C

### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS02 (890-3732-1).

### **GC VOA**

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

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (890-3757-A-1-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: SS02 (890-3732-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43077 and analytical batch 880-43285 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.

### **Client Sample Results**

Client: Ensolum Job ID: 890-3732-1 Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Lab Sample ID: 890-3732-1 **Client Sample ID: SS02** 

Date Collected: 12/28/22 10:35 Date Received: 12/30/22 09:30 Matrix: Solid

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 19:24	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 19:24	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 19:24	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/04/23 08:41	01/04/23 19:24	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 19:24	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/04/23 08:41	01/04/23 19:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			01/04/23 08:41	01/04/23 19:24	1
1,4-Difluorobenzene (Surr)	109		70 - 130			01/04/23 08:41	01/04/23 19:24	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/05/23 10:15	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/06/23 13:03	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	50.0	mg/Kg		01/05/23 11:23	01/06/23 00:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/06/23 00:22	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/06/23 00:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	15	S1-	70 - 130			01/05/23 11:23	01/06/23 00:22	1
o-Terphenyl	15	S1-	70 - 130			01/05/23 11:23	01/06/23 00:22	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	graphy - S	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55.1	F1	5.00	mg/Kg			01/06/23 08:59	1

### **Surrogate Summary**

Client: Ensolum Job ID: 890-3732-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-				Percent Surrogate Rec
		BFB1	DFBZ1	· ·
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-23150-A-21-G MS	Matrix Spike	100	109	
880-23150-A-21-H MSD	Matrix Spike Duplicate	99	107	
890-3732-1	SS02	106	109	
LCS 880-43114/1-A	Lab Control Sample	103	110	
LCSD 880-43114/2-A	Lab Control Sample Dup	96	105	
MB 880-43114/5-A	Method Blank	97	107	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			
DFBZ = 1,4-Difluorobenz	ene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recover	y (Acceptance L
		1001	OTPH1		
ab Sample ID	Client Sample ID	(70-130)	(70-130)		
-3732-1	SS02	15 S1-	15 S1-		
3757-A-1-C MS	Matrix Spike	112	85		
-3757-A-1-D MSD	Matrix Spike Duplicate	114	88		
8 880-43251/2-A	Lab Control Sample	104	98		
SD 880-43251/3-A	Lab Control Sample Dup	118	110		
8 880-43251/1-A	Method Blank	113	109		

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3732-1 Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43114/5-A

**Matrix: Solid** Analysis Batch: 43117 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43114

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1

MB MB

MD MD

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97	70 - 130	01/04/23 08:41	01/04/23 12:40	1
1,4-Difluorobenzene (Surr)	107	70 - 130	01/04/23 08:41	01/04/23 12:40	1

Lab Sample ID: LCS 880-43114/1-A

Matrix: Solid

Analysis Batch: 43117

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 43114

		Spike	LCS	LCS				%Rec	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	0.100	0.1023	-	mg/Kg		102	70 - 130	
	Toluene	0.100	0.09910		mg/Kg		99	70 - 130	
	Ethylbenzene	0.100	0.09831		mg/Kg		98	70 - 130	
ĺ	m-Xylene & p-Xylene	0.200	0.2028		mg/Kg		101	70 - 130	
	o-Xylene	0.100	0.09740		mg/Kg		97	70 - 130	
ı									

LCS LCS

Surrogate	%Recovery Quali	ifier Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	110	70 - 130

Lab Sample ID: LCSD 880-43114/2-A

**Matrix: Solid** 

Analysis Batch: 43117

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 43114

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Limit Benzene 0.100 0.08858 mg/Kg 89 70 - 130 14 35 Toluene 0.100 0.08677 mg/Kg 87 70 - 130 13 35 Ethylbenzene 0.100 0.08671 mg/Kg 87 70 - 130 13 35 0.200 m-Xylene & p-Xylene 0.1795 mg/Kg 90 70 - 130 12 35 0.100 0.08715 70 - 130 o-Xylene mg/Kg 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1.4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-23150-A-21-G MS

**Matrix: Solid** 

Analysis Batch: 43117

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

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09062		mg/Kg		90	70 - 130	
Toluene	<0.00201	U	0.101	0.08564		mg/Kg		85	70 - 130	

**Eurofins Carlsbad** 

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Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3732-1

SDG: 03D2024136

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

Lab Sample ID: 880-23150-A-21-G MS

Lab Sample ID: 880-23150-A-21-H MSD

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 43117

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.101	0.08624		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1768		mg/Kg		88	70 - 130	
o-Xylene	<0.00201	U	0.101	0.08556		mg/Kg		85	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 43114

RPD

**Analysis Batch: 43117** Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 0.0996 Benzene <0.00201 U 0.08738 mg/Kg 88 70 - 130 4 35 Toluene 0.08362 <0.00201 U 0.0996 mg/Kg 84 70 - 130 2 35 Ethylbenzene <0.00201 U 0.0996 0.08437 mg/Kg 85 70 - 130 2 35 <0.00402 U 0.199 0.1737 70 - 130 2 35 m-Xylene & p-Xylene mg/Kg 87 0.0996 <0.00201 U 0.08400 70 - 130 2 o-Xylene mg/Kg 84

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-43251/1-A

**Matrix: Solid** 

Analysis Batch: 43191

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43251

		MB	MB						
1	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1
	Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1
(	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	F	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	01/0	05/23 11:23	01/05/23 19:47	1
o-Terphenyl	109		70 - 130	01/0	05/23 11:23	01/05/23 19:47	1

Lab Sample ID: LCS 880-43251/2-A

**Matrix: Solid** 

Analysis Batch: 43191

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

Prep Batch: 43251

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	978.5		mg/Kg		98	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	924.6		mg/Kg		92	70 - 130	
C10-C28)								

Job ID: 890-3732-1

Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

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

Lab Sample ID: LCS 880-43251/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

Analysis Batch: 43191

Prep Type: Total/NA Prep Batch: 43251

LCS LCS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 104 70 - 130 o-Terphenyl 98 70 - 130

Lab Sample ID: LCSD 880-43251/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 43191

Prep Type: Total/NA Prep Batch: 43251

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 1009 101 70 - 1303 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 999.4 100 mg/Kg 70 - 13020 8 C10-C28)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 118 110 70 - 130 o-Terphenyl

Lab Sample ID: 890-3757-A-1-C MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

Analysis Batch: 43191

Prep Type: Total/NA Prep Batch: 43251

Sample Sample MS MS Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 U 999 750.7 mg/Kg 70 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 885.9 mg/Kg 87 70 - 130

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 112 o-Terphenyl 85 70 - 130

Lab Sample ID: 890-3757-A-1-D MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** 

Analysis Batch: 43191

Prep Type: Total/NA Prep Batch: 43251

Sample Sample MSD MSD RPD Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit U 999 826.1 78 Gasoline Range Organics <49.9 mg/Kg 70 - 130 10 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 913.9 mg/Kg 90 70 - 130 3 20

C10-C28)

MSD MSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 114 70 - 130 88 70 - 130 o-Terphenyl

Client: Ensolum

Job ID: 890-3732-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43077/1-A

**Matrix: Solid** 

Analysis Batch: 43285

Client Sample ID: Method Blank

**Prep Type: Soluble** 

104

90 - 110

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 01/06/23 08:28

Lab Sample ID: LCS 880-43077/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 43285** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits

MB MB

Chloride mg/Kg Lab Sample ID: LCSD 880-43077/3-A Client Sample ID: Lab Control Sample Dup

250

**Matrix: Solid Prep Type: Soluble** 

259.2

Analysis Batch: 43285

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 257.6 90 - 110 mg/Kg 103

Lab Sample ID: 890-3732-1 MS **Client Sample ID: SS02 Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 43285

Spike MS MS %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 361.5 F1 Chloride 55.1 F1 250 123 90 - 110 mg/Kg

Lab Sample ID: 890-3732-1 MSD Client Sample ID: SS02 **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 43285

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 55.1 F1 250 345.7 F1 mg/Kg 116 90 - 110 20

### **QC Association Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3732-1

SDG: 03D2024136

### **GC VOA**

### Prep Batch: 43114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Total/NA	Solid	5035	
MB 880-43114/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 43117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Total/NA	Solid	8021B	43114
MB 880-43114/5-A	Method Blank	Total/NA	Solid	8021B	43114
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	8021B	43114
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43114
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	43114
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43114

### **Analysis Batch: 43217**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Total/NA	Solid	Total BTEX	

### **GC Semi VOA**

### Analysis Batch: 43191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Total/NA	Solid	8015B NM	43251
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015B NM	43251
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43251
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43251
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	43251
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43251

### Prep Batch: 43251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Total/NA	Solid	8015NM Prep	
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 43392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Total/NA	Solid	8015 NM	

### HPLC/IC

### Leach Batch: 43077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Soluble	Solid	DI Leach	
MB 880-43077/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Eurofins Carlsbad** 

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## **QC Association Summary**

Client: Ensolum Job ID: 890-3732-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

### HPLC/IC (Continued)

### Leach Batch: 43077 (Continued)

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	890-3732-1 MS	SS02	Soluble	Solid	DI Leach	
l	890-3732-1 MSD	SS02	Soluble	Solid	DI Leach	

### **Analysis Batch: 43285**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-1	SS02	Soluble	Solid	300.0	43077
MB 880-43077/1-A	Method Blank	Soluble	Solid	300.0	43077
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	300.0	43077
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43077
890-3732-1 MS	SS02	Soluble	Solid	300.0	43077
890-3732-1 MSD	SS02	Soluble	Solid	300.0	43077

### Lab Chronicle

Client: Ensolum Job ID: 890-3732-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Client Sample ID: SS02 Lab Sample ID: 890-3732-1

Date Collected: 12/28/22 10:35
Date Received: 12/30/22 09:30
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			4.98 g	5 mL	43114	01/04/23 08:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43117	01/04/23 19:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43217	01/05/23 10:15	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43392	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/06/23 00:22	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43077	01/03/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			43285	01/06/23 08:59	CH	EET MID

### Laboratory References:

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

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4.0

4.0

13

## **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-3732-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

### **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	T104704400-22-25	
The following analytes the agency does not of	• •	it the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

### **Method Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3732-1

SDG: 03D2024136

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
Ol 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** 

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5

7

0

10

11

13

### Sample Summary

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3732-1

SDG: 03D2024136

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3732-1	SS02	Solid	12/28/22 10:35	12/30/22 09:30	0.5

3

4

5

9

10

12

13

eurofins

Xenco

**Environment Testing** 

Phone:

303-517-8437 Midland, TX 79701

Project Name:

Dominator Fed 25 Pad 1

03D2024136

Address:

601 N Marienfeld St Suite 400

Company Name: Project Manager:

Ensolum, LLC Josh Adams

City, State ZIP:

Sampler's Name:

Project Location: Project Number:

32.09511, -103.53140

Due Date:

Routine

☐ Rush

Code

ANALYSIS REQUEST

Cool: Cool HCL: HC H<sub>2</sub>S0<sub>4</sub>: H<sub>2</sub>

MeOH: Me HNO<sub>3</sub>: HN

NaOH: Na

None: NO

DI Water: H<sub>2</sub>O

Preservative Codes

Turn Around

TAT starts the day received by the lab, if received by 4:30pm

Kase Parker

SAMPLE RECEIPT

Temp Blank: Yes No

Cooler Custody Seals: Samples Received Intact:

ample Custody Seals:

Yes Yes

No

Correction Factor:

Thermometer ID: (Yes)No

Wet Ice:

Yes

8

**Parameters** 

Corrected Temperature: Temperature Reading:

Sample Identification

Matrix

Sampled

Time

Grab/

**TPH (8015)** 

BTEX (8021

CHLORIDES (EPA: 300.0)

890-3732 Chain of Custody

Cont # of

SS02

12/28/2022 Sampled Date

1035

0.5 Depth

Grab/ Comp

# Chain of Custody

	Midland, TX ( EL Paso, T) Hobbs, NM	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:
	Bill to: (if different) Kalei Jennings	Kalei Jennings	Work Order Comments
	Company Name:	Ensolum, LLC	Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
	Address:	601 N Marienfeld St Suite 400	State of Project:
	City, State ZIP:	Midland, TX 79701	Reporting: Level III
מ	l kiennings@ensolur	nail kiennings@ensolum.com	Deliverables: EDD

		n			
	*	4			
12.30 22 950	Joe W	2 CAM	12/39/22 9:00 am	C-th	1/ Cull may Com
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)
	subcontractors. It assigns standard terms and conditions If such losses are due to circumstances beyond the control ed. These terms will be enforced unless previously negotiated.	too, its affillates and subcontractors. It assigns neurred by the client if such losses are due to cirence, but not analyzed. These terms will be enfo	n client company to Eurofins Xen Illty for any losses or expenses ir h sample submitted to Eurofins X	of samples constitutes a valid purchase order froi st of samples and shall not assume any responsib applied to each project and a charge of \$5 for eac	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.
7470 / 7471	Ag TI U Hg: 1631 / 245.1 / 7470 / 7471	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu		Circle Method(s) and Metal(s) to be analyzed
Sn U V Zn	Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Tl	8RCRA 13PPM Texas 11 AISb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Ti Sn U V zn	1 Al Sb As Ba Be B	8RCRA 13PPM Texas 1	Total 200.7 / 6010 200.8 / 6020:

NaOH+Ascorbic Acid: SAPC Zn Acetate+NaOH: Zn

Sample Comments

Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>: NaSO<sub>3</sub> NaHSO<sub>4</sub>: NABIS H<sub>3</sub>PO<sub>4</sub>: HP

### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-3732-1 SDG Number: 03D2024136

Login Number: 3732 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.	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: 890-3732-1

SDG Number: 03D2024136

Login Number: 3732 **List Source: Eurofins Midland** List Number: 2 List Creation: 01/03/23 09:51 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: Josh Adams Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/6/2023 12:33:13 PM

# **JOB DESCRIPTION**

DOMINATOR FED 25 PAD 1 SDG NUMBER 03D2024136

# **JOB NUMBER**

890-3734-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Released to Imaging: 3/22/2023 10:22:05 AM

# **Eurofins Carlsbad**

### **Job Notes**

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

## **Authorization**

Generated 1/6/2023 12:33:13 PM

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

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

Client: Ensolum
Project/Site: DOMINATOR FED 25 PAD 1

Laboratory Job ID: 890-3734-1 SDG: 03D2024136

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### **Definitions/Glossary**

Job ID: 890-3734-1 Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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" 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: 890-3734-1 Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Job ID: 890-3734-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3734-1

### Receipt

The sample was received on 12/30/2022 9:30 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 1.0°C

### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS03 (890-3734-1).

### **GC VOA**

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

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (890-3757-A-1-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: SS03 (890-3734-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43077 and analytical batch 880-43285 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.

Date Collected: 12/28/22 10:40

### **Client Sample Results**

Client: Ensolum Job ID: 890-3734-1 Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

**Client Sample ID: SS03** 

Lab Sample ID: 890-3734-1

Matrix: Solid

Date Received: 12/30/22 09:30 Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/04/23 08:41	01/04/23 20:05	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/04/23 08:41	01/04/23 20:05	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/04/23 08:41	01/04/23 20:05	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/04/23 08:41	01/04/23 20:05	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/04/23 08:41	01/04/23 20:05	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/04/23 08:41	01/04/23 20:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			01/04/23 08:41	01/04/23 20:05	1
1,4-Difluorobenzene (Surr)	112		70 - 130			01/04/23 08:41	01/04/23 20:05	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			01/05/23 10:15	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/06/23 13:03	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	<49.9	U	49.9	mg/Kg		01/05/23 11:23	01/06/23 02:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/05/23 11:23	01/06/23 02:12	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/05/23 11:23	01/06/23 02:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	153	S1+	70 - 130			01/05/23 11:23	01/06/23 02:12	1
o-Terphenyl	137	S1+	70 - 130			01/05/23 11:23	01/06/23 02:12	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			5.03	mg/Kg			01/06/23 09:23	

# **Surrogate Summary**

Client: Ensolum Job ID: 890-3734-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Re
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-23150-A-21-G MS	Matrix Spike	100	109	
880-23150-A-21-H MSD	Matrix Spike Duplicate	99	107	
890-3734-1	SS03	109	112	
LCS 880-43114/1-A	Lab Control Sample	103	110	
LCSD 880-43114/2-A	Lab Control Sample Dup	96	105	
MB 880-43114/5-A	Method Blank	97	107	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			
DFBZ = 1,4-Difluorobenz	ene (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)	
890-3734-1	SS03	153 S1+	137 S1+	
890-3757-A-1-C MS	Matrix Spike	112	85	
890-3757-A-1-D MSD	Matrix Spike Duplicate	114	88	
LCS 880-43251/2-A	Lab Control Sample	104	98	
LCSD 880-43251/3-A	Lab Control Sample Dup	118	110	
MB 880-43251/1-A	Method Blank	113	109	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-3734-1 Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43114/5-A

Lab Sample ID: LCS 880-43114/1-A

**Matrix: Solid** Analysis Batch: 43117

Analyte

Benzene

Toluene Ethylbenzene m-Xylene & p-Xylene

o-Xylene

Xylenes, Total

**Matrix: Solid** 

**Analysis Batch: 43117** 

Client Sample ID: Method Blank

01/04/23 12:40

01/04/23 12:40

Prep Type: Total/NA

Prep Batch: 43114

MB	MB						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1

mg/Kg

mg/Kg

MB MB

<0.00200 U

<0.00400 U

Surrogate	%Recovery Q	ualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97	70 - 130	01/04/23 08:41	01/04/23 12:40	1
1,4-Difluorobenzene (Surr)	107	70 - 130	01/04/23 08:41	01/04/23 12:40	1

0.00200

0.00400

**Client Sample ID: Lab Control Sample** 

01/04/23 08:41

01/04/23 08:41

Prep Type: Total/NA

Prep Batch: 43114

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits mg/Kg Benzene 0.100 0.1023 102 70 - 130 Toluene 0.100 0.09910 mg/Kg 99 70 - 130 0.100 0.09831 Ethylbenzene mg/Kg 98 70 - 130 0.200 0.2028 101 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.09740 o-Xylene mg/Kg 70 - 130

Spike

Added

0.100

0.100

0.100

0.200

0.100

LCSD LCSD

0.08858

0.08677

0.08671

0.1795

0.08715

Result Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Client Sample ID: Lab Control Sample Dup

%Rec

89

87

87

90

**Matrix: Solid** 

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 43117

Lab Sample ID: LCSD 880-43114/2-A

Prep Type: Total/NA Prep Batch: 43114 %Rec

70 - 130

70 - 130

Limits RPD Limit 70 - 130 14 35 70 - 130 13 35 70 - 130 13 35

12

RPD

35

35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	96	70 - 130
1,4-Difluorobenzene (Surr)	105	70 - 130

Lab Sample ID: 880-23150-A-21-G MS

**Matrix: Solid** 

Analysis Batch: 43117

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

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09062		mg/Kg		90	70 - 130	
Toluene	<0.00201	U	0.101	0.08564		mg/Kg		85	70 - 130	

**Eurofins Carlsbad** 

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# **QC Sample Results**

Client: Ensolum Job ID: 890-3734-1 SDG: 03D2024136 Project/Site: DOMINATOR FED 25 PAD 1

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

Lab Sample ID: 880-23150-A-21-G MS

**Matrix: Solid** 

Analysis Batch: 43117

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.101	0.08624		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1768		mg/Kg		88	70 - 130	
o-Xylene	<0.00201	U	0.101	0.08556		mg/Kg		85	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	100	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Batch: 43114

**Matrix: Solid** 

Lab Sample ID: 880-23150-A-21-H MSD

**Analysis Batch: 43117** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0996	0.08738		mg/Kg		88	70 - 130	4	35
Toluene	<0.00201	U	0.0996	0.08362		mg/Kg		84	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0996	0.08437		mg/Kg		85	70 - 130	2	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1737		mg/Kg		87	70 - 130	2	35
o-Xylene	<0.00201	U	0.0996	0.08400		mg/Kg		84	70 - 130	2	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-43251/1-A

**Matrix: Solid** 

Analysis Batch: 43191

Client Sample	D: N	lethod	Blank
P	ren Tv	me: To	tal/NA

Prep Batch: 43251

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/05/23 11:23	01/05/23 19:47	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	01/05/23 11:23	01/05/23 19:47	1
o-Terphenyl	109		70 - 130	01/05/23 11:23	01/05/23 19:47	1

Lab Sample ID: LCS 880-43251/2-A

**Matrix: Solid** 

Analysis Batch: 43191

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

Prep Batch: 43251

-	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics	1000	978.5		mg/Kg		98	70 - 130
(GRO)-C6-C10							
Diesel Range Organics (Over	1000	924.6		mg/Kg		92	70 - 130

C10-C28)

Job ID: 890-3734-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

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

Lab Sample ID: LCS 880-43251/2-A

Lab Sample ID: LCSD 880-43251/3-A

Lab Sample ID: 890-3757-A-1-C MS

**Matrix: Solid** 

**Matrix: Solid** 

Client: Ensolum

Analysis Batch: 43191

Diesel Range Organics (Over

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43251

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 104 70 - 130 o-Terphenyl 98 70 - 130

Client Sample ID: Lab Control Sample Dup

70 - 130

100

Prep Type: Total/NA

Prep Batch: 43251

8

Analysis Batch: 43191 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 1009 101 70 - 1303 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10

1000

C10-C28)

**Matrix: Solid** 

LCSD LCSD

Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 118 110 70 - 130 o-Terphenyl

Client Sample ID: Matrix Spike

Prep Type: Total/NA

**Analysis Batch: 43191** Prep Batch: 43251 Sample Sample MS MS

999.4

mg/Kg

Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 U 999 750.7 mg/Kg 70 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 885.9 mg/Kg 87 70 - 130

C10-C28)

MS MS %Recovery Qualifier Surrogate

Limits 70 - 130 1-Chlorooctane 112 o-Terphenyl 85 70 - 130

Lab Sample ID: 890-3757-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Analysis Batch: 43191

Prep Type: Total/NA

Prep Batch: 43251

Sample Sample MSD MSD RPD Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit U 999 826.1 78 Gasoline Range Organics <49.9 mg/Kg 70 - 130 10 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 913.9 mg/Kg 90 70 - 130 3 20

C10-C28)

MSD MSD

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 114 70 - 130 88 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: 890-3734-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43077/1-A

Matrix: Solid

Analysis Batch: 43285

MB MB

 Analyte
 Result Chloride
 Qualifier
 RL Vinit
 Unit Mg/Kg
 Prepared Dil Fac Vinit
 Analyzed Dil Fac Vinit Vin

Lab Sample ID: LCS 880-43077/2-A

Matrix: Solid

**Analysis Batch: 43285** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 259.2 mg/Kg 104 90 - 110

Lab Sample ID: LCSD 880-43077/3-A

Matrix: Solid

Analysis Batch: 43285

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 257.6 mg/Kg 103 90 - 110

Lab Sample ID: 890-3732-A-1-E MS

Matrix: Solid

Analysis Batch: 43285

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier %Rec Unit Limits Chloride 55.1 F1 250 361.5 F1 123 90 - 110 mg/Kg

Lab Sample ID: 890-3732-A-1-F MSD

Matrix: Solid

Analysis Batch: 43285

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 55.1 F1 250 345.7 F1 mg/Kg 116 90 - 110 20

# **QC Association Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3734-1

SDG: 03D2024136

### **GC VOA**

# Prep Batch: 43114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Total/NA	Solid	5035	
MB 880-43114/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 43117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Total/NA	Solid	8021B	43114
MB 880-43114/5-A	Method Blank	Total/NA	Solid	8021B	43114
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	8021B	43114
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43114
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	43114
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43114

### **Analysis Batch: 43219**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Total/NA	Solid	Total BTEX	

### **GC Semi VOA**

# Analysis Batch: 43191

Г					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Total/NA	Solid	8015B NM	43251
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015B NM	43251
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43251
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43251
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	43251
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43251

### Prep Batch: 43251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-43251/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43251/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3757-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3757-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 43394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Total/NA	Solid	8015 NM	

# HPLC/IC

### Leach Batch: 43077

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<del>_</del>					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Soluble	Solid	DI Leach	
MB 880-43077/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

# **QC Association Summary**

Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1 Job ID: 890-3734-1

SDG: 03D2024136

# HPLC/IC (Continued)

# Leach Batch: 43077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### **Analysis Batch: 43285**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3734-1	SS03	Soluble	Solid	300.0	43077
MB 880-43077/1-A	Method Blank	Soluble	Solid	300.0	43077
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	300.0	43077
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43077
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	43077
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43077

# **Lab Chronicle**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

Client Sample ID: SS03 Lab Sample ID: 890-3734-1

Date Collected: 12/28/22 10:40
Date Received: 12/30/22 09:30
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			4.96 g	5 mL	43114	01/04/23 08:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43117	01/04/23 20:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43219	01/05/23 10:15	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43394	01/06/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43251	01/05/23 11:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43191	01/06/23 02:12	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43077	01/03/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			43285	01/06/23 09:23	CH	EET MID

### Laboratory References:

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

Released to Imaging: 3/22/2023 10:22:05 AM Page 14 of 20

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# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-3734-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

**Laboratory: Eurofins Midland** 

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

Authority	Pr	ogram	Identification Number	<b>Expiration Date</b>
Texas	NE	ELAP	T104704400-22-25	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
the agency does not of	fer certification.	•	, , ,	.,
the agency does not of Analysis Method	fer certification .  Prep Method	Matrix	Analyte	-,
0 ,		Matrix Solid	Analyte Total TPH	

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# **Method Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3734-1

SDG: 03D2024136

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
3015NM Prep	Microextraction	SW846	EET MID
Ol 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: DOMINATOR FED 25 PAD 1

Job ID: 890-3734-1

SDG: 03D2024136

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3734-1	SS03	Solid	12/28/22 10:40	12/30/22 09:30	0.5

# **Chain of Custody**

	n 6	M My Complete	1 +#5 12/30/22	Relinquished by: (Signature) Received by: (Signature) Date/Time Relinq	or Eurolins Xenco. A minimum charge of secun will be applied to each project and a charge of serior each sample subminier to Euronia Xenco, but not	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 beyong the control of the cont	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	Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co		200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca			/	1		SS03 S 12/28/2022 1040 0.5 Grab/ 1 X X X	Sample Identification  Matrix  Sampled  Sampled  Sampled  Depth  Comp  Cont  C	RID	Seals. Tes No Was reimperature reading.	Tes No N/A Correction Factor.	ar.	lemp Blank: (Ves) No Wet Ice: Ves No	ille lab, il lever party + John	Sampler's Name: Kase Parker TAT starts the day received by	Project Location: 32.09511, -103.53140 Due Date:	Project Number: 03D2024136 Routine Rush Code	Project Name: Dominator Fed 25 Pad 1 Turn Around	Phone: 303-517-8437 Email: kjennings@ensolum.com, jadams@ensolum.com	City, State ZIP: Midland, TX 79701 City, State ZIP: Midland, TX 79701	Address: 601 N Marienfeld St Suite 400 Address: 601 N Marienfeld St Suite 400	Company Name: Ensolum, LLC Company Name: Ensolum, LLC	Project Manager: Josh Adams Bill to: (if different) Kalei Jennings		Hobbs, NM (575) 392-7550. Carisbad, NM (575) 988-3199	EL M850, IX (915) 365-3443, LUDDUCK, IX (906) / 94-1250
Revised Date: 08/25/2020 Rev. 2020 2			10000000000000000000000000000000000000	Relinquished by: (Signature) / Received by: (Signature) Date/Time	), Dut IIV, BIRI) ACU, HIBSE WHIS THE DE CHISTONE MINOS PROFESSORY	ed by the client if such losses are due to circumstances beyond the control  but not analyzed. These terms will be enforced unless previously negotiated.	is affiliates and subcontractors. It assigns standard terms and conditions	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag II U ng. 1031/243.1/14/0//7/1	Ha: 1631 / 245 1 / 7470 / 74								Sample Comments		The state of the s	890-3734 Chain of Custody Zn Acetate+NaOH: Zn	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> . Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> .	NaHSO4: NABIS	H.PO.: HP	HCC: HC	<u>u</u>	None: NO Di Water: H <sub>2</sub> O	ervativ	lum.com Deliverables: EDD L ADaP1 L Other:	Level III LPSI/USI L	State of Project:	Program: UST/PST  PRP  Brownfields  RRC  Superfund	Work Order Comments	www.xenco.com Fage / or /		17 (000) 134-1230

# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3734-1

SDG Number: 03D2024136

Login Number: 3734 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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3734-1

SDG Number: 03D2024136

List Source: Eurofins Midland List Creation: 01/03/23 09:51 AM

Creator: Rodriguez, Leticia

Login Number: 3734

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	

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<6mm (1/4").

**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Josh Adams Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 1/6/2023 12:33:46 PM

# **JOB DESCRIPTION**

DOMINATOR FED 25 PAD 1 SDG NUMBER 03D2024136

# **JOB NUMBER**

890-3735-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

# **Eurofins Carlsbad**

# **Job Notes**

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

# **Authorization**

Generated 1/6/2023 12:33:46 PM

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

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

Client: Ensolum
Project/Site: DOMINATOR FED 25 PAD 1

Laboratory Job ID: 890-3735-1 SDG: 03D2024136

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# **Definitions/Glossary**

Job ID: 890-3735-1 Client: Ensolum Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

**TNTC** Too Numerous To Count

### **Case Narrative**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3735-1

SDG: 03D2024136

Job ID: 890-3735-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3735-1

### Receipt

The sample was received on 12/30/2022 9:30 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 1.0°C

### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS04 (890-3735-1).

### **GC VOA**

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

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 880-43077 and analytical batch 880-43285 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.

Matrix: Solid

Lab Sample ID: 890-3735-1

# **Client Sample Results**

Client: Ensolum Job ID: 890-3735-1 SDG: 03D2024136

Project/Site: DOMINATOR FED 25 PAD 1

Date Collected: 12/28/22 10:45 Date Received: 12/30/22 09:30

**Client Sample ID: SS04** 

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		01/04/23 08:41	01/04/23 20:25	
Toluene	<0.00199	U	0.00199	mg/Kg		01/04/23 08:41	01/04/23 20:25	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/04/23 08:41	01/04/23 20:25	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/04/23 08:41	01/04/23 20:25	
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/04/23 08:41	01/04/23 20:25	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/04/23 08:41	01/04/23 20:25	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)			70 - 130			01/04/23 08:41	01/04/23 20:25	
1,4-Difluorobenzene (Surr)	107		70 - 130			01/04/23 08:41	01/04/23 20:25	
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/05/23 10:15	
Method: SW846 8015 NM - Diese	ol Bango Organ	ice (DBO) (	GC)					
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			01/06/23 11:39	
-								
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(GC)					
Method: SW846 8015B NM - Die Analyte		nics (DRO) Qualifier	(GC)	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Gasoline Range Organics		Qualifier	• •	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared 01/04/23 09:27	Analyzed 01/05/23 18:23	Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U	RL		<u>D</u>	<u>.</u>		Dil Fa
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <50.0	Qualifier U	RL 50.0	mg/Kg	<u> </u>	01/04/23 09:27	01/05/23 18:23	
Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)	Result <50.0 <50.0	Qualifier U U U	FL 50.0 50.0	mg/Kg	<u>D</u>	01/04/23 09:27	01/05/23 18:23 01/05/23 18:23	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result  <50.0 <50.0 <50.0	Qualifier U U U	RL 50.0 50.0 50.0	mg/Kg	<u>D</u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27	01/05/23 18:23 01/05/23 18:23 01/05/23 18:23	
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 U U	50.0 50.0 50.0 <i>Limits</i>	mg/Kg	<u> </u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27 <i>Prepared</i>	01/05/23 18:23 01/05/23 18:23 01/05/23 18:23 Analyzed	
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 U Qualifier S1+	8L 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27 <b>Prepared</b> 01/04/23 09:27	01/05/23 18:23 01/05/23 18:23 01/05/23 18:23 Analyzed 01/05/23 18:23	Dil Fa
	Result	Qualifier U U Qualifier S1+	8L 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg	<u>D</u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27 <b>Prepared</b> 01/04/23 09:27	01/05/23 18:23 01/05/23 18:23 01/05/23 18:23 Analyzed 01/05/23 18:23	Dil Fa

# **Surrogate Summary**

Client: Ensolum Job ID: 890-3735-1 Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Re
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-23150-A-21-G MS	Matrix Spike	100	109	
880-23150-A-21-H MSD	Matrix Spike Duplicate	99	107	
890-3735-1	SS04	112	107	
LCS 880-43114/1-A	Lab Control Sample	103	110	
LCSD 880-43114/2-A	Lab Control Sample Dup	96	105	
MB 880-43114/5-A	Method Blank	97	107	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			
DFBZ = 1,4-Difluorobenz	ene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance L
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-3735-1	SS04	115	134 S1+	
390-3746-A-1-B MS	Matrix Spike	116	120	
390-3746-A-1-C MSD	Matrix Spike Duplicate	117	124	
LCS 880-43132/2-A	Lab Control Sample	106	112	
LCSD 880-43132/3-A	Lab Control Sample Dup	95	104	
MB 880-43132/1-A	Method Blank	116	141 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3735-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

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

Lab Sample ID: MB 880-43114/5-A

**Matrix: Solid** 

Analysis Batch: 43117

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43114

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	01/04/23 08:	01/04/23 12:40	1
1,4-Difluorobenzene (Surr)	107		70 - 130	01/04/23 08:	41 01/04/23 12:40	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43114

Lab Sample ID: LCS 880-43114/1-A Matrix: Solid

Analysis Batch: 43117

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1023		mg/Kg		102	70 - 130	
Toluene	0.100	0.09910		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.09831		mg/Kg		98	70 - 130	
m-Xylene & p-Xylene	0.200	0.2028		mg/Kg		101	70 - 130	
o-Xylene	0.100	0.09740		mg/Kg		97	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	110	70 - 130

Lab Sample ID: LCSD 880-43114/2-A **Client Sample ID: Lab Control Sample Dup** 

Matrix: Solid

Analysis Batch: 43117

Prep Type: Total/NA

Prep Batch: 43114

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08858		mg/Kg		89	70 - 130	14	35
Toluene	0.100	0.08677		mg/Kg		87	70 - 130	13	35
Ethylbenzene	0.100	0.08671		mg/Kg		87	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1795		mg/Kg		90	70 - 130	12	35
o-Xylene	0.100	0.08715		mg/Kg		87	70 - 130	11	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1 4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-23150-A-21-G MS

Matrix: Solid

Analysis Batch: 43117

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

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09062		mg/Kg		90	70 - 130	 
Toluene	<0.00201	U	0.101	0.08564		mg/Kg		85	70 - 130	

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Page 8 of 20

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3735-1 SDG: 03D2024136

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

Lab Sample ID: 880-23150-A-21-G MS

Lab Sample ID: 880-23150-A-21-H MSD

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 43117

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.101	0.08624		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1768		mg/Kg		88	70 - 130	
o-Xylene	<0.00201	U	0.101	0.08556		mg/Kg		85	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 43114

RPD

Analysis Batch: 43117 Sample Sample Spike MSD MSD Result Qualifier %Rec RPD Limit Analyte babbA Result Qualifier Unit Limits Benzene <0.00201 U 0.0996 0.08738 mg/Kg 88 70 - 130 4 35 Toluene <0.00201 U 0.0996 0.08362 mg/Kg 84 70 - 130 2 35 Ethylbenzene <0.00201 0.0996 0.08437 85 70 - 130 2 35 U mg/Kg 0.199 35 m-Xylene & p-Xylene <0.00402 U 0.1737 mg/Kg 87 70 - 130 2 0.0996 <0.00201 U 0.08400 70 - 130 2 o-Xylene mg/Kg 84

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-43132/1-A

**Matrix: Solid** 

Analysis Batch: 43193

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43132

мв мв Result Qualifier RL Unit D Prepared Analyzed Dil Fac Analyte 50.0 01/04/23 09:27 01/05/23 08:23 <50.0 U Gasoline Range Organics mg/Kg (GRO)-C6-C10 01/04/23 09:27 01/05/23 08:23 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 01/04/23 09:27 01/05/23 08:23 mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	01/04/23 09:23	01/05/23 08:23	1
o-Terphenyl	141	S1+	70 - 130	01/04/23 09:23	01/05/23 08:23	1

Lab Sample ID: LCS 880-43132/2-A

Analysis Batch: 43193

Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Prep Batch: 43132

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit %Rec Limits 1000 97 70 - 130 Gasoline Range Organics 973.0 mg/Kg (GRO)-C6-C10

1092

mg/Kg

109

70 - 130

Diesel Range Organics (Over C10-C28)

**Eurofins Carlsbad** 

Client: Ensolum

Job ID: 890-3735-1

SDG: 03D2024136

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

Lab Sample ID: LCS 880-43132/2-A

Lab Sample ID: LCSD 880-43132/3-A

Project/Site: DOMINATOR FED 25 PAD 1

**Matrix: Solid** 

Analysis Batch: 43193

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43132

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 106 70 - 130 o-Terphenyl 112 70 - 130

Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 43193 Prep Batch: 43132 LCSD LCSD %Rec RPD

Spike Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 1000 1093 109 70 - 13012 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 953.9 95 mg/Kg 70 - 13020 14 C10-C28)

LCSD LCSD

Sample Sample

Surrogate %Recovery Qualifier Limits 95 70 - 130 1-Chlorooctane 104 70 - 130 o-Terphenyl

Lab Sample ID: 890-3746-A-1-B MS Client Sample ID: Matrix Spike

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

**Analysis Batch: 43193** Prep Batch: 43132 Sample Sample MS MS Spike

Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 U 999 1302 mg/Kg 130 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 1249 mg/Kg 123 70 - 130

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 116 o-Terphenyl 120 70 - 130

Lab Sample ID: 890-3746-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA

Spike

Analysis Batch: 43193 Prep Batch: 43132

MSD MSD

Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit U 999 1285 Gasoline Range Organics <49.9 mg/Kg 129 70 - 130 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 1262 mg/Kg 125 70 - 130 20

C10-C28)

MSD MSD Qualifier Surrogate %Recovery Limits 1-Chlorooctane 117 70 - 130 124 70 - 130 o-Terphenyl

**Eurofins Carlsbad** 

RPD

%Rec

Project/Site: DOMINATOR FED 25 PAD 1

Client: Ensolum

Job ID: 890-3735-1

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

SDG: 03D2024136

**Prep Type: Soluble** 

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43077/1-A

**Matrix: Solid** 

Analysis Batch: 43285

мв мв

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 01/06/23 08:28

Lab Sample ID: LCS 880-43077/2-A

**Matrix: Solid** 

**Analysis Batch: 43285** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 259.2 mg/Kg 104 90 - 110

Lab Sample ID: LCSD 880-43077/3-A

**Matrix: Solid** 

Analysis Batch: 43285

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 257.6 mg/Kg 103 90 - 110

Lab Sample ID: 890-3732-A-1-E MS

**Matrix: Solid** 

Analysis Batch: 43285

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier %Rec Unit Limits Chloride 55.1 F1 250 361.5 F1 123 90 - 110 mg/Kg

Lab Sample ID: 890-3732-A-1-F MSD

**Matrix: Solid** 

Analysis Batch: 43285

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 55.1 F1 250 345.7 F1 mg/Kg 116 90 - 110 20

# **QC Association Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3735-1 SDG: 03D2024136

### **GC VOA**

### Prep Batch: 43114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3735-1	SS04	Total/NA	Solid	5035	
MB 880-43114/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 43117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3735-1	SS04	Total/NA	Solid	8021B	43114
MB 880-43114/5-A	Method Blank	Total/NA	Solid	8021B	43114
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	8021B	43114
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43114
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	43114
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43114

### Analysis Batch: 43220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3735-1	SS04	Total/NA	Solid	Total BTEX	

### **GC Semi VOA**

# Prep Batch: 43132

<b>Lab Sample ID</b> 890-3735-1	Client Sample ID SS04	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-43132/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43132/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43132/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3746-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3746-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 43193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3735-1	SS04	Total/NA	Solid	8015B NM	43132
MB 880-43132/1-A	Method Blank	Total/NA	Solid	8015B NM	43132
LCS 880-43132/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43132
LCSD 880-43132/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43132
890-3746-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	43132
890-3746-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43132

### Analysis Batch: 43372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3735-1	SS04	Total/NA	Solid	8015 NM	

# HPLC/IC

### Leach Batch: 43077

Released to Imaging: 3/22/2023 10:22:05 AM

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3735-1	SS04	Soluble	Solid	DI Leach	
MB 880-43077/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

# **QC Association Summary**

Client: Ensolum

Job ID: 890-3735-1 Project/Site: DOMINATOR FED 25 PAD 1

SDG: 03D2024136

# HPLC/IC (Continued)

# Leach Batch: 43077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### **Analysis Batch: 43285**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3735-1	SS04	Soluble	Solid	300.0	43077
MB 880-43077/1-A	Method Blank	Soluble	Solid	300.0	43077
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	300.0	43077
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43077
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	43077
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43077

# Lab Chronicle

Client: Ensolum Job ID: 890-3735-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

Client Sample ID: SS04 Lab Sample ID: 890-3735-1

Date Collected: 12/28/22 10:45
Date Received: 12/30/22 09:30
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	43114	01/04/23 08:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43117	01/04/23 20:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43220	01/05/23 10:15	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43372	01/06/23 11:39	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43132	01/04/23 09:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43193	01/05/23 18:23	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	43077	01/03/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			43285	01/06/23 09:30	CH	EET MID

### Laboratory References:

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

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# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-3735-1
Project/Site: DOMINATOR FED 25 PAD 1 SDG: 03D2024136

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	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
Total BTEX		Solid	Total BTEX	

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# **Method Summary**

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3735-1

SDG: 03D2024136

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B 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
I 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

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# Sample Summary

Client: Ensolum

Project/Site: DOMINATOR FED 25 PAD 1

Job ID: 890-3735-1

SDG: 03D2024136

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3735-1	SS04	Solid	12/28/22 10:45	12/30/22 09:30	0.5

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Relinguished by: (Signature)

Received by: (Signature)

12/30/22

9:00 or

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Date/Time

Relinquished by: (Signature)

Received by: (Signature)

2-30-20

Revised Date: 08/25/2020 Rev. 2020.2

# eurofins

# Chain of Custody

Ensolum, L 601 N Mari Midland, T. 303-517-8	Bill to: (If Company Address: City, Stat Email: kjenning Turn Around	TX (432) 704-5440, San Aritonio, IX (210) 509-3334 so, TX (915) 585-3443, Lubbock, TX (806) 794-1296 .NM (575) 392-7550, Carlsbad, NM (575) 988-3199 Kalei Jennings Ensolum, LLC 601 N Marienfeld St Suite 400 Midland, TX 79701 solum.com_jadams@ensolum.com ANALYS Pres.	www.xenco.com Page // Work Order Comments    Work Order Comments	W.Xenco.com Page of Work Order Comments  PRP Brownfields RRC Superfund ADaPT Other:  Preservative Codes  None: NO DI Water: H <sub>2</sub> O
	Email: kjennings(		grables: EDD L	3 1
	Turn Around	ANALYS	REQUEST	Preservative (
Project Number: 03D2024136	∕ Routine □ Rush	Code		
Project Location: 32.09511, -103.53140	Due Date:			Cool: Cool MeOH: Me
	TAT starts the day received by	ьу		
	the lab, if received by 4:30pm	_		H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT   Temp Blank: (Yes) No	lo Wet Ice: Yes No	nete		H₃PO₄: HP
Samples Received Intact: (Yes) No Thermometer ID:	neter ID: No Mode			NaHSO4: NABIS
Cooler Custody Seals: Yes No NA Correction Factor:		PA:		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals: Yes No N/A Temperat	Temperature Reading:	1	890-3735 Chain of Custody	Zn Acetate+NaOH: Zn
Total Containers: Corrected	Corrected Temperature:	802		NaOH+ASCOIDIC ACId. SAFC
Sample Identification Matrix Sampled	Time Depth	Comp Cont CHLOR		Sample Comments
SS04 S 12/28/2022	1045 0.5'	Grab/ 1 X X X		
	1			
Total 200.7 / 6010 200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe	Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub>	<sub>2</sub> Na Sr Tl Sn U V Zn
thod(s) and Met	P/SPLP	Sb As Ba Be Cd Cr Co Cu Pb Mn	Ag TI U	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 subcon 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	constitutes a valid purchase order s	om client company to Eurofins Xenco, its affiliates and subcontract bility for any losses or expenses incurred by the client if such losse	tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control	0
Relinquished by: (Signature)	Received by: (Signature)	Date/Time Relinquished by: (Sig	(Signature) A Received by: (Signature)	nature) Date/Time

1/6/2023

# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3735-1

SDG Number: 03D2024136

Login Number: 3735 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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3735-1 SDG Number: 03D2024136

Login Number: 3735
List Source: Eurofins Midland
List Number: 2
List Creation: 01/03/23 09:51 AM

Creator: Rodriguez, Leticia

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

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<6mm (1/4").

**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Josh Adams Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 1/6/2023 12:33:46 PM

# **JOB DESCRIPTION**

Dominator Fed 25 Pad 1 SDG NUMBER 03D2024136

# **JOB NUMBER**

890-3736-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



# **Eurofins Carlsbad**

# **Job Notes**

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

# **Authorization**

Generated 1/6/2023 12:33:46 PM

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

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

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Client: Ensolum
Project/Site: Dominator Fed 25 Pad 1
Laboratory Job ID: 890-3736-1
SDG: 03D2024136

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### **Definitions/Glossary**

Job ID: 890-3736-1 Client: Ensolum Project/Site: Dominator Fed 25 Pad 1

SDG: 03D2024136

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

**TNTC** Too Numerous To Count

### **Case Narrative**

Client: Ensolum

Project/Site: Dominator Fed 25 Pad 1

Job ID: 890-3736-1 SDG: 03D2024136

Job ID: 890-3736-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3736-1

### Receipt

The sample was received on 12/30/2022 9:30 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 1.0°C

### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3736-1).

### **GC VOA**

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

### GC Semi VOA

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 880-43077 and analytical batch 880-43285 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.

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Job ID: 890-3736-1

Matrix: Solid

Client: Ensolum Project/Site: Dominator Fed 25 Pad 1 SDG: 03D2024136

**Client Sample ID: SS05** Lab Sample ID: 890-3736-1

Date Collected: 12/28/22 10:50 Date Received: 12/30/22 09:30

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 20:46	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 20:46	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 20:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/04/23 08:41	01/04/23 20:46	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/04/23 08:41	01/04/23 20:46	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/04/23 08:41	01/04/23 20:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/04/23 08:41	01/04/23 20:46	1
1,4-Difluorobenzene (Surr)	103		70 - 130			01/04/23 08:41	01/04/23 20:46	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/05/23 10:15	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			RL	Unit	U	Prepared	Anaiyzed	DII Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/06/23 11:39	1
• •				mg/Kg			01/06/23 11:39	
	sel Range Orga	nics (DRO)	(GC)					1
Method: SW846 8015B NM - Dies Analyte	sel Range Orga Result	nics (DRO) Qualifier	(GC)	Unit	D	Prepared	Analyzed	
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga	nics (DRO) Qualifier	(GC)		<u>D</u>	Prepared 01/04/23 09:27		1
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	sel Range Orga Result	nics (DRO) Qualifier	(GC)	Unit	<u>D</u>		Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <49.9	nics (DRO) Qualifier	(GC) RL 49.9	Unit mg/Kg	<u>D</u>	01/04/23 09:27	<b>Analyzed</b> 01/05/23 18:44	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <49.9	nics (DRO) Qualifier U	(GC) RL 49.9	Unit mg/Kg	<u>D</u>	01/04/23 09:27	<b>Analyzed</b> 01/05/23 18:44	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)	sel Range Orga Result <49.9	nics (DRO) Qualifier U	(GC)  RL  49.9	Unit mg/Kg mg/Kg	D	01/04/23 09:27	Analyzed 01/05/23 18:44 01/05/23 18:44	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)	sel Range Orga Result <49.9 <49.9	nics (DRO) Qualifier U	(GC)  RL 49.9  49.9  49.9	Unit mg/Kg mg/Kg	<u>D</u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27	Analyzed 01/05/23 18:44 01/05/23 18:44	Dil Fac
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	Sel Range Orga   Result	nics (DRO) Qualifier U	(GC)  RL 49.9  49.9  49.9  Limits	Unit mg/Kg mg/Kg	<u>D</u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27 <i>Prepared</i>	Analyzed 01/05/23 18:44 01/05/23 18:44 01/05/23 18:44 Analyzed	Dil Face 1 1 1 Dil Face
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	sel Range Orga           Result         <49.9	nics (DRO) Qualifier U U Qualifier S1+	(GC)  RL 49.9  49.9  49.9  Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27 <b>Prepared</b> 01/04/23 09:27	Analyzed 01/05/23 18:44 01/05/23 18:44 01/05/23 18:44  Analyzed 01/05/23 18:44	Dil Fac
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  Method: MCAWW 300.0 - Anions Analyte	sel Range Orga           Result           <49.9	nics (DRO) Qualifier U U Qualifier S1+	(GC)  RL 49.9  49.9  49.9  Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	01/04/23 09:27 01/04/23 09:27 01/04/23 09:27 <b>Prepared</b> 01/04/23 09:27	Analyzed 01/05/23 18:44 01/05/23 18:44 01/05/23 18:44  Analyzed 01/05/23 18:44	Dil Fac

### **Surrogate Summary**

Client: Ensolum Job ID: 890-3736-1
Project/Site: Dominator Fed 25 Pad 1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recove	ry (Acceptance Lin
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-23150-A-21-G MS	Matrix Spike	100	109		
880-23150-A-21-H MSD	Matrix Spike Duplicate	99	107		
890-3736-1	SS05	111	103		
LCS 880-43114/1-A	Lab Control Sample	103	110		
LCSD 880-43114/2-A	Lab Control Sample Dup	96	105		
MB 880-43114/5-A	Method Blank	97	107		
Surrogate Legend					
BFB = 4-Bromofluorober	nzene (Surr)			_	
DFBZ = 1,4-Difluorobenz	zene (Surr)				

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

Matrix: Solid Prep Type: Total/NA

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3736-1	SS05	117	138 S1+
890-3746-A-1-B MS	Matrix Spike	116	120
890-3746-A-1-C MSD	Matrix Spike Duplicate	117	124
LCS 880-43132/2-A	Lab Control Sample	106	112
LCSD 880-43132/3-A	Lab Control Sample Dup	95	104
MB 880-43132/1-A	Method Blank	116	141 S1+

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Project/Site: Dominator Fed 25 Pad 1

Job ID: 890-3736-1 SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43114/5-A

Lab Sample ID: LCS 880-43114/1-A

**Matrix: Solid** Analysis Batch: 43117

Analyte

Benzene Toluene Ethylbenzene m-Xylene & p-Xylene

o-Xylene

Xylenes, Total

**Matrix: Solid** 

Analysis Batch: 43117

Client Sample ID: Method Blank

01/04/23 12:40

01/04/23 12:40

Prep Type: Total/NA

Prep Batch: 43114

MB	MB						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
<0.00200	U	0.00200	mg/Kg		01/04/23 08:41	01/04/23 12:40	1
<0.00400	U	0.00400	mg/Kg		01/04/23 08:41	01/04/23 12:40	1

mg/Kg

mg/Kg

MB MB

<0.00200 U

<0.00400 U

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97	70 - 130	01/04/23 08:41	01/04/23 12:40	1
1.4-Difluorobenzene (Surr)	107	70 - 130	01/04/23 08:41	01/04/23 12:40	1

0.00200

0.00400

**Client Sample ID: Lab Control Sample** 

01/04/23 08:41

01/04/23 08:41

Prep Type: Total/NA

Prep Batch: 43114

Prep Type: Total/NA

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.1023 mg/Kg 102 70 - 130 Toluene 0.100 0.09910 mg/Kg 99 70 - 130 0.100 0.09831 Ethylbenzene mg/Kg 98 70 - 130 0.200 0.2028 101 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.09740 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery Qua	alifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 43117

Lab Sample ID: LCSD 880-43114/2-A

					Prep	Batch:	43114	
LCSD	LCSD				%Rec		RPD	
Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
.08858		mg/Kg		89	70 - 130	14	35	

Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08858	mg/Kg		89	70 - 130	14	35
Toluene	0.100	0.08677	mg/Kg		87	70 - 130	13	35
Ethylbenzene	0.100	0.08671	mg/Kg		87	70 - 130	13	35
m-Xylene & p-Xylene	0.200	0.1795	mg/Kg		90	70 - 130	12	35
o-Xylene	0.100	0.08715	mg/Kg		87	70 - 130	11	35

Spike

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1.4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-23150-A-21-G MS

**Matrix: Solid** 

Analysis Batch: 43117

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

Prep Batch: 43114

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09062		mg/Kg		90	70 - 130	
Toluene	< 0.00201	U	0.101	0.08564		mg/Kg		85	70 - 130	

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Client: Ensolum

Project/Site: Dominator Fed 25 Pad 1

Job ID: 890-3736-1 SDG: 03D2024136

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

Lab Sample ID: 880-23150-A-21-G MS

**Matrix: Solid** 

Analysis Batch: 43117

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 43114

mpie Sampie	<b>Spike</b>	IVIS	IVIS				%Rec
esult Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
0201 U	0.101	0.08624		mg/Kg		86	70 - 130
0402 U	0.202	0.1768		mg/Kg		88	70 - 130
0201 U	0.101	0.08556		mg/Kg		85	70 - 130
)		desult 0201         Qualifier         Added 0.101           0202         U         0.202	desult (10201)         Qualifier         Added (10201)         Result (10201)           (10201)         U         0.101         0.08624           (10402)         U         0.202         0.1768	desult opening         Qualifier         Added opening         Result opening         Qualifier           00201         U         0.101         0.08624           00402         U         0.202         0.1768	desult opening         Qualifier         Added opening         Result opening         Qualifier opening         Unit opening           00201         U         0.101         0.08624         mg/Kg           00402         U         0.202         0.1768         mg/Kg	desult violent         Qualifier         Added Added         Result violent         Qualifier Violent         Unit violent         D           00201         U         0.101         0.08624         mg/Kg         mg/Kg           00402         U         0.202         0.1768         mg/Kg	desult opening         Qualifier         Added opening         Result opening         Qualifier opening         Unit opening         D opening         %Rec opening           00201 U         0.101         0.08624         mg/Kg         86           00402 U         0.202         0.1768         mg/Kg         88

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	100	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 43114

RPD

Lab Sample ID: 880-23150-A-21-H MSD **Matrix: Solid** 

Analysis Batch: 43117

Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits 0.0996 Benzene <0.00201 U 0.08738 mg/Kg 88 70 - 130 4 35 Toluene <0.00201 U 0.0996 0.08362 mg/Kg 84 70 - 130 2 35 Ethylbenzene <0.00201 U 0.0996 0.08437 mg/Kg 85 70 - 130 2 35 <0.00402 U 0.199 87 70 - 130 2 35 m-Xylene & p-Xylene 0.1737 mg/Kg 0.0996 <0.00201 U 0.08400 70 - 130 2 o-Xylene mg/Kg 84

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-43132/1-A

**Matrix: Solid** 

Analysis Batch: 43193

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43132

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/04/23 09:27	01/05/23 08:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/04/23 09:27	01/05/23 08:23	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/04/23 09:27	01/05/23 08:23	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	01,	/04/23 09:27	01/05/23 08:23	1
o-Terphenyl	141	S1+	70 - 130	01/	/04/23 09:27	01/05/23 08:23	1

Lab Sample ID: LCS 880-43132/2-A

**Matrix: Solid** 

Analysis Batch: 43193

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 43132

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	973.0		mg/Kg		97	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1092		mg/Kg		109	70 - 130	
C10-C28)								

Project/Site: Dominator Fed 25 Pad 1

Client: Ensolum

Job ID: 890-3736-1

SDG: 03D2024136

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

Lab Sample ID: LCS 880-43132/2-A

Lab Sample ID: LCSD 880-43132/3-A

**Matrix: Solid** 

Analysis Batch: 43193

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 43132

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 106 70 - 130 o-Terphenyl 112 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 43132

**Matrix: Solid** Analysis Batch: 43193

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 1000 1093 109 70 - 13012 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 953.9 95 mg/Kg 70 - 13020 14

C10-C28)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 95 70 - 130 1-Chlorooctane 104 70 - 130 o-Terphenyl

Lab Sample ID: 890-3746-A-1-B MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

**Analysis Batch: 43193** 

Prep Type: Total/NA

Prep Batch: 43132

Sample Sample MS MS Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 U 999 1302 mg/Kg 130 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 1249 mg/Kg 123 70 - 130

C10-C28)

MS MS

%Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 116 o-Terphenyl 120 70 - 130

Lab Sample ID: 890-3746-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Analysis Batch: 43193

Prep Type: Total/NA

%Rec

Prep Batch: 43132

Sample Sample MSD MSD RPD Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit U 999 1285 Gasoline Range Organics <49.9 mg/Kg 129 70 - 130 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 1262 mg/Kg 125 70 - 130 20

C10-C28)

MSD MSD

Qualifier Surrogate %Recovery Limits 1-Chlorooctane 117 70 - 130 124 70 - 130 o-Terphenyl

Dil Fac

Client: Ensolum

Job ID: 890-3736-1 SDG: 03D2024136

**Prep Type: Soluble** 

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43077/1-A

Project/Site: Dominator Fed 25 Pad 1

Matrix: Solid

Analysis Batch: 43285

5.00

Unit

mg/Kg

D

Prepared

MB MB

Analyte Result Qualifier RL

Chloride <5.00 U

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Method Blank

Analyzed

01/06/23 08:28

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: LCS 880-43077/2-A

Matrix: Solid

**Analysis Batch: 43285** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 259.2 mg/Kg 104 90 - 110

Lab Sample ID: LCSD 880-43077/3-A

Matrix: Solid

Analysis Batch: 43285

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit Limits RPD Limit Chloride 250 257.6 mg/Kg 103 90 - 110

Lab Sample ID: 890-3732-A-1-E MS

Matrix: Solid

Analysis Batch: 43285

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier %Rec Unit Limits 361.5 F1 Chloride 55.1 F1 250 123 90 - 110 mg/Kg

Lab Sample ID: 890-3732-A-1-F MSD

Matrix: Solid

Analysis Batch: 43285

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	55.1	F1	250	345.7	F1	mg/Kg		116	90 - 110	4	20

**Eurofins Carlsbad** 

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### **QC Association Summary**

Client: Ensolum

Project/Site: Dominator Fed 25 Pad 1

Job ID: 890-3736-1 SDG: 03D2024136

### **GC VOA**

### Prep Batch: 43114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3736-1	SS05	Total/NA	Solid	5035	
MB 880-43114/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 43117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3736-1	SS05	Total/NA	Solid	8021B	43114
MB 880-43114/5-A	Method Blank	Total/NA	Solid	8021B	43114
LCS 880-43114/1-A	Lab Control Sample	Total/NA	Solid	8021B	43114
LCSD 880-43114/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43114
880-23150-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	43114
880-23150-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43114

### Analysis Batch: 43221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3736-1	SS05	Total/NA	Solid	Total BTEX	

### **GC Semi VOA**

### Prep Batch: 43132

<b>Lab Sample ID</b> 890-3736-1	Client Sample ID SS05	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-43132/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43132/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43132/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3746-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3746-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 43193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3736-1	SS05	Total/NA	Solid	8015B NM	43132
MB 880-43132/1-A	Method Blank	Total/NA	Solid	8015B NM	43132
LCS 880-43132/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43132
LCSD 880-43132/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43132
890-3746-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	43132
890-3746-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43132

### Analysis Batch: 43373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3736-1	SS05	Total/NA	Solid	8015 NM	

### HPLC/IC

### Leach Batch: 43077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3736-1	SS05	Soluble	Solid	DI Leach	_ ·
MB 880-43077/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

### **QC Association Summary**

Client: Ensolum Job ID: 890-3736-1 Project/Site: Dominator Fed 25 Pad 1

SDG: 03D2024136

### **HPLC/IC** (Continued)

### Leach Batch: 43077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### **Analysis Batch: 43285**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3736-1	SS05	Soluble	Solid	300.0	43077
MB 880-43077/1-A	Method Blank	Soluble	Solid	300.0	43077
LCS 880-43077/2-A	Lab Control Sample	Soluble	Solid	300.0	43077
LCSD 880-43077/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43077
890-3732-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	43077
890-3732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43077

### **Lab Chronicle**

Client: Ensolum Job ID: 890-3736-1 Project/Site: Dominator Fed 25 Pad 1 SDG: 03D2024136

**Client Sample ID: SS05** Lab Sample ID: 890-3736-1

Date Collected: 12/28/22 10:50 Date Received: 12/30/22 09:30

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	43114	01/04/23 08:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43117	01/04/23 20:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43221	01/05/23 10:15	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43373	01/06/23 11:39	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43132	01/04/23 09:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43193	01/05/23 18:44	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	43077	01/03/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			43285	01/06/23 09:36	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: 890-3736-1
Project/Site: Dominator Fed 25 Pad 1 SDG: 03D2024136

Laboratory: Eurofins Midland

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

Authority		ogram	Identification Number	<b>Expiration Date</b>			
Texas	NE	ELAP	T104704400-22-25	06-30-23			
The following analytes the agency does not of	' '	t the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes fo			
Analysis Method	Prep Method	Matrix	Analyte				
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH				

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### **Method Summary**

Client: Ensolum

Method

Total BTEX 8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

8021B

Project/Site: Dominator Fed 25 Pad 1

**Method Description** 

Total BTEX Calculation

Microextraction

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

**Deionized Water Leaching Procedure** 

Anions, Ion Chromatography

Closed System Purge and Trap

Job ID: 890-3736-1

**EET MID** 

SDG: 03D2024136

		3
Protocol	Laboratory	
SW846	EET MID	1
TAL SOP	EET MID	
SW846	EET MID	E
SW846	EET MID	5
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

### Sample Summary

Client: Ensolum

Project/Site: Dominator Fed 25 Pad 1

Job ID: 890-3736-1

SDG: 03D2024136

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3736-1	SS05	Solid	12/28/22 10:50	12/30/22 09:30	0.5

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# Chain of Custody n, TX (281) 240-4200, Dallas, TX (214) 902-0300

	3 len	Relingdished 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.	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed								2022	Sample Identification	Total Containers:	Sample Custody Seals:	Cooler Custody Seals:	Samples Received Intact:	SAMPLE RECEIPT	PO#:	Sampler's Name:	Project Location:	Project Number:	Project Name:	Phone:	City, State ZIP:			Project Manager:		eurofins
	n	(Signature)	locument and relinquish o will be liable only for t mum charge of \$85.00 v	10 200.8 / 6020: id Metal(s) to be an								2			Yes No	Yes No		Temp Blank:		Kase Parker	32.09511, -103.53140	03D2024136	Dominator Fed 25 Pad 1	303-517-8437	Midland, TX 79701	601 N Marienfeld St Suite 400	Ensolum, LLC	Josh Adams	Xenco	
	The state of the s	Receive	ment of samples cons he cost of samples an vill be applied to each							1		12/28/2022	Matrix Date Sampled	Corrected Temperature:	N/A/ Temperature Reading:	Correction Factor:	-	ik: Yes No		arker	103.53140	24136	ed 25 Pad 1			St Suite 400			CO	Environment Testing
		Received by: (Signature)	stitutes a valid purchase d shall not assume any project and a charge of	8RCRA 13PPM TCLP/SPLP					1	1		1050 0.5'	Time Depth	mperature:	Reading:	actor:	-W	Wet Ice: Yes	the lab, if received by 4:30pm	TAT starts the day received by	Due Date:	Routine 🗆 Rush	Turn Around	Email: kjenr	City,	Address:	Comp	Bill to		sting
	12/36/22		order from client con responsibility for any \$5 for each sample su	Texas 11 Al Sb 6010: 8RCRA S					/-			Grab/ 1	th Grab/ # of Comp Cont	o	ن	2) Pa	T COO H	No Nete		eceived by		ush Code		ings@ensolum.	City, State ZIP:		Company Name:	Bill to: (if different)	EL Paso, TX () Hobbs, NM (5)	Houston, TX ( Midland, TX (43
	22 9,00	Date/Time	npany to Eurofins Xen losses or expenses in Jbmitted to Eurofins X	As Ba Be B b As Ba Be (						-		×	TPH (8)	015)		PA:	300	.0)						Email: kjennings@ensolum.com, jadams@ensolum.com	Midland, TX 79701	601 N Marienfeld St Suite 400	Ensolum, LLC	Kalei Jennings	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 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
0	2 Con Wahn	Relinquished by	co, its affiliates and si curred by the client if enco, but not analyze	Cd Ca Cr Co Cd Cr Co Cu F		/	/							890-3/36									ANALY	nsolum.com		St Suite 400			ock, TX (806) 794-1 bad, NM (575) 988-3	las, TX (214) 902-03 itonio, TX (210) 509-
		by: (Signature)	ubcontractors. It assisuch losses are due to the such losses are due to the such losses will be the such that the	Fe Pb Mg Mn Mo Ni	1									736 Chain of Custody									LYSIS REQUEST	Del	Rep	Sta	Pro		296 199	00 3334
	Lie	Received by:	It assigns standard terms and conditions re due to circumstances beyond the contro will be enforced unless previously negotia	Mn Mo Ni K Se Se Ag TI U									_	tody					_				\$T	Deliverables: EDD L	Reporting: Level II	State of Project:	ST		WW	Wor
	3	d by: (Signature)	d conditions nd the control ously negotiated.	Ag SiO <sub>2</sub> Na Hg: 1631/2										z	27	- 2					0	Z		J ADaPT □	_evel III   PST/U	]	☐ PRP☐ Brownfields ☐ RRC ☐	Work Order Comments	www.xenco.com	Work Order No: _
	2-30.			TI Sn U V									Sample Comments	NaUH+Ascorbic Acid: SAFC	Zn Acetate+NaOH: Zn	Na <sub>2</sub> S <sub>2</sub> U <sub>3</sub> . NaSU <sub>3</sub>	NaHSO <sub>4</sub> : NABIS	H <sub>3</sub> PO <sub>4</sub> : HP			<u> </u>	None: NO DI	Preservative Codes	☐ Other:	ST U TRRP U			nments	Page /	
	9. 99. 43. 0	Date/Time		Zn -71									ıments	Id. SAPC	7. SABO				NaCH: Na	HNO3: HN	MeOH: Me	DI Water: H <sub>2</sub> O	Codes		Level IV L		Superfund [		of	
as	ed to	Ima	aging: 3	3/22/20	)23 .	10:2	22:	05.	AM				Page	∋ 1	8 c	f 2	0													1/

Revised Date: 08/25/2020 Rev. 2020.2

### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3736-1

SDG Number: 03D2024136

Login Number: 3736 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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3736-1 SDG Number: 03D2024136

Login Number: 3736 **List Source: Eurofins Midland** List Number: 2

List Creation: 01/03/23 09:51 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	

Released to Imaging: 3/22/2023 10:22:05 AM

<6mm (1/4").

**Environment Testing** 

### **ANALYTICAL REPORT**

### PREPARED FOR

Attn: Josh Adams Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/17/2023 4:19:47 PM

### **JOB DESCRIPTION**

Dominator Fed 25 CTB SDG NUMBER 03D2024136

### **JOB NUMBER**

890-3828-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



### **Eurofins Carlsbad**

### **Job Notes**

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

### **Authorization**

Generated 1/17/2023 4:19:47 PM

Authorized for release by Jessica Kramer, Project Manager <u>Jessica.Kramer@et.eurofinsus.com</u> (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 22

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Client: Ensolum
Project/Site: Dominator Fed 25 CTB
Laboratory Job ID: 890-3828-1
SDG: 03D2024136

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### **Definitions/Glossary**

Job ID: 890-3828-1 Client: Ensolum Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

### **Qualifiers**

**GC VOA** 

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

U Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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

**HPLC/IC** 

Qualifier **Qualifier Description** 

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: 890-3828-1 Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

Job ID: 890-3828-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3828-1

### Receipt

The samples were received on 1/11/2023 3:02 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

### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-3828-1), FS02 (890-3828-2) and FS03 (890-3828-3).

### **GC VOA**

Method 8021B: The laboratory control sample (LCS) for preparation batch 880-43913 and analytical batch 880-43959 recovered outside control limits for the following analytes: o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

### GC Semi VOA

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: FS02 (890-3828-2), (LCSD 880-43908/3-A), (MB 880-43908/1-A) and (890-3793-A-1-C). 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: 890-3828-1

Job ID: 890-3828-1

Client: Ensolum Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

**Client Sample ID: FS01** Date Collected: 01/11/23 11:45 Date Received: 01/11/23 15:02

Sample Depth: 6'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/13/23 14:03	01/16/23 22:28	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/13/23 14:03	01/16/23 22:28	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/13/23 14:03	01/16/23 22:28	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/13/23 14:03	01/16/23 22:28	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		01/13/23 14:03	01/16/23 22:28	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/13/23 14:03	01/16/23 22:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			01/13/23 14:03	01/16/23 22:28	1
1,4-Difluorobenzene (Surr)	95		70 - 130			01/13/23 14:03	01/16/23 22:28	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			01/17/23 14:25	1
Mathadi CW04C 004E NM Diag	ol Pango Organ	ice (DBO) (	20)					
Method: 544646 6015 NW - Diese	FI Kange Organ	י) (טאט) פטו	<b>3</b> C)					
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	•	Qualifier	,	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/16/23 16:51	Dil Fac
Analyte Total TPH	Result <49.9	Qualifier U	RL 49.9		<u>D</u>	Prepared		
Analyte Total TPH  Method: SW846 8015B NM - Die	Result <49.9	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	Qualifier Unics (DRO) Qualifier	RL 49.9 (GC)	mg/Kg			01/16/23 16:51	1 Dil Fac
Analyte	Result <49.9  sel Range Orga Result	Qualifier U  nics (DRO) Qualifier U	RL 49.9 (GC)	mg/Kg		Prepared	01/16/23 16:51  Analyzed	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 <49.9	Qualifier U  nics (DRO) Qualifier U	RL 49.9  (GC)  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 01/13/23 13:08	01/16/23 16:51  Analyzed  01/15/23 17:39	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  sel Range Orga Result <49.9  <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 01/13/23 13:08 01/13/23 13:08	01/16/23 16:51  Analyzed  01/15/23 17:39  01/15/23 17:39	1 Dil Fac 1 1
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	Qualifier U  nics (DRO) Qualifier U  U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/13/23 13:08 01/13/23 13:08 01/13/23 13:08	01/16/23 16:51  Analyzed 01/15/23 17:39 01/15/23 17:39	Dil Fac  1  1  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	Qualifier U  nics (DRO) Qualifier U  U	RL 49.9 (GC) RL 49.9 49.9 49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/13/23 13:08 01/13/23 13:08 01/13/23 13:08 Prepared	O1/16/23 16:51  Analyzed  O1/15/23 17:39  O1/15/23 17:39  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	RL 49.9 (GC) RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 01/13/23 13:08 01/13/23 13:08 01/13/23 13:08 Prepared 01/13/23 13:08	01/16/23 16:51  Analyzed 01/15/23 17:39  01/15/23 17:39  01/15/23 17:39  Analyzed 01/15/23 17:39	1 Dil Fac 1 1
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 01/13/23 13:08 01/13/23 13:08 01/13/23 13:08 Prepared 01/13/23 13:08	01/16/23 16:51  Analyzed 01/15/23 17:39  01/15/23 17:39  01/15/23 17:39  Analyzed 01/15/23 17:39	1 1 1 Dil Fac 1

**Client Sample ID: FS02** Lab Sample ID: 890-3828-2 Date Collected: 01/11/23 11:50

Date Received: 01/11/23 15:02

Sample Depth: 6'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/13/23 14:03	01/16/23 22:49	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/13/23 14:03	01/16/23 22:49	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/13/23 14:03	01/16/23 22:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/13/23 14:03	01/16/23 22:49	1
o-Xylene	<0.00199	U *+	0.00199	mg/Kg		01/13/23 14:03	01/16/23 22:49	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/13/23 14:03	01/16/23 22:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130			01/13/23 14:03	01/16/23 22:49	1

**Eurofins Carlsbad** 

**Matrix: Solid** 

Matrix: Solid

Lab Sample ID: 890-3828-2

Job ID: 890-3828-1

Client: Ensolum SDG: 03D2024136 Project/Site: Dominator Fed 25 CTB

**Client Sample ID: FS02** 

Date Collected: 01/11/23 11:50 Date Received: 01/11/23 15:02

Sample Depth: 6'

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	74	70 - 130	01/13/23 14:03	01/16/23 22:49	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			01/17/23 14:25	1

1		
Method: SW846 8015 NM -	Discal Dance Occasion	(DDO) (CC)
I WETDOO'S WAAH AU15 NIVI .	. Diesei Ranne Ornanics	(I)R()) ((=(.)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	ma/Ka			01/16/23 16:51	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	<49.9	U	49.9	mg/Kg		01/13/23 13:08	01/15/23 18:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/13/23 13:08	01/15/23 18:00	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/13/23 13:08	01/15/23 18:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119	70 - 130	01/13/23 13:08	01/15/23 18:00	1
o-Terphenyl	138 S1+	70 - 130	01/13/23 13:08	01/15/23 18:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	229		4.97	mg/Kg			01/17/23 10:48	1

**Client Sample ID: FS03** Lab Sample ID: 890-3828-3

Date Collected: 01/11/23 12:50 Date Received: 01/11/23 15:02

Sample Depth: 12'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/13/23 14:03	01/16/23 23:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/13/23 14:03	01/16/23 23:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/13/23 14:03	01/16/23 23:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/13/23 14:03	01/16/23 23:09	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		01/13/23 14:03	01/16/23 23:09	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/13/23 14:03	01/16/23 23:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			01/13/23 14:03	01/16/23 23:09	1

4-Bromofluorobenzene (Surr)	102	 70 - 130	01/13/23 14:03	01/16/23 23:09	1
1,4-Difluorobenzene (Surr)	93	70 - 130	01/13/23 14:03	01/16/23 23:09	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			01/17/23 14:25	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			01/16/23 16:51	1

**Eurofins Carlsbad** 

**Matrix: Solid** 

Matrix: Solid

Lab Sample ID: 890-3828-3

01/17/23 10:54

### **Client Sample Results**

Client: Ensolum Job ID: 890-3828-1
Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

**Client Sample ID: FS03** 

Date Collected: 01/11/23 12:50 Date Received: 01/11/23 15:02

Sample Depth: 12'

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/13/23 13:08	01/15/23 18:21	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/13/23 13:08	01/15/23 18:21	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/13/23 13:08	01/15/23 18:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130			01/13/23 13:08	01/15/23 18:21	1
o-Terphenyl -	125		70 - 130			01/13/23 13:08	01/15/23 18:21	1
Method: MCAWW 300.0 - Anions	. Ion Chromato	ography - So	oluble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

4.99

mg/Kg

235

5

7

a

10

11

13

### **Surrogate Summary**

Job ID: 890-3828-1 Client: Ensolum Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3828-1	FS01	95	95	
890-3828-1 MS	FS01	97	101	
890-3828-1 MSD	FS01	113	98	
890-3828-2	FS02	84	74	
890-3828-3	FS03	102	93	
LCS 880-43913/1-A	Lab Control Sample	119	104	
LCSD 880-43913/2-A	Lab Control Sample Dup	119	100	
MB 880-43913/5-A	Method Blank	85	90	
MB 880-43969/5-A	Method Blank	83	90	
Surrogate Legend				

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	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3793-A-1-D MS	Matrix Spike	92	100	
890-3793-A-1-E MSD	Matrix Spike Duplicate	96	107	
890-3828-1	FS01	123	121	
890-3828-2	FS02	119	138 S1+	
890-3828-3	FS03	104	125	
LCS 880-43908/2-A	Lab Control Sample	111	127	
LCSD 880-43908/3-A	Lab Control Sample Dup	110	132 S1+	
MB 880-43908/1-A	Method Blank	167 S1+	203 S1+	

**Surrogate Legend** 

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum

Job ID: 890-3828-1

SDG: 03D2024136

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43913/5-A

Lab Sample ID: LCS 880-43913/1-A

**Matrix: Solid** 

Project/Site: Dominator Fed 25 CTB

Analysis Batch: 43959

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43913

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/13/23 14:03	01/16/23 22:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/13/23 14:03	01/16/23 22:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/13/23 14:03	01/16/23 22:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/13/23 14:03	01/16/23 22:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/13/23 14:03	01/16/23 22:07	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		01/13/23 14:03	01/16/23 22:07	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85	70 - 130	01/13/23 14:03	01/16/23 22:07	1
1,4-Difluorobenzene (Surr)	90	70 - 130	01/13/23 14:03	01/16/23 22:07	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 43913

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.1043 mg/Kg 104 70 - 130 Toluene 0.100 0.1082 mg/Kg 108 70 - 130 0.100 0.1054 105 Ethylbenzene mg/Kg 70 - 130 0.200 0.2303 115 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.1406 \*+ 70 - 130 o-Xylene mg/Kg 141

LCS LCS

Surrogate	%Recovery Qualifier	r Limits
4-Bromofluorobenzene (Surr)	119	70 - 130
1,4-Difluorobenzene (Surr)	104	70 - 130

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

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 43959

Analysis Batch: 43959

Lab Sample ID: LCSD 880-43913/2-A

Prep Type: Total/NA Prep Batch: 43913

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09122		mg/Kg		91	70 - 130	13	35
Toluene	0.100	0.09650		mg/Kg		97	70 - 130	11	35
Ethylbenzene	0.100	0.09396		mg/Kg		94	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.2079		mg/Kg		104	70 - 130	10	35
o-Xylene	0.100	0.1221		mg/Kg		122	70 - 130	14	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	119	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

Lab Sample ID: 890-3828-1 MS

**Matrix: Solid** 

Analysis Batch: 43959

**Client Sample ID: FS01** Prep Type: Total/NA

Prep Batch: 43913

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.100	0.07974		mg/Kg		80	70 - 130	
Toluene	<0.00201	U	0.100	0.08136		mg/Kg		81	70 - 130	

### QC Sample Results

Client: Ensolum Job ID: 890-3828-1 Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

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

Lab Sample ID: 890-3828-1 MS

**Matrix: Solid** Analysis Batch: 43959

Prep Batch: 43913 Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits D Ethylbenzene <0.00201 U 0.100 0.07176 72 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00402 U 0.200 0.1497 mg/Kg 75 70 - 130 <0.00201 U\*+ 0.100 o-Xylene 0.08631 86 70 - 130 mg/Kg

MS MS

Surrogate	%Recovery Qua	lifier Limits
4-Bromofluorobenzene (Surr)	97	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: 890-3828-1 MSD

**Matrix: Solid** 

Analysis Batch: 43959

**Client Sample ID: FS01** Prep Type: Total/NA Prep Batch: 43913

**Client Sample ID: FS01** 

Prep Type: Total/NA

RPD

Sample Sample Spike MSD MSD Result Qualifier Added Result Qualifier %Rec RPD Limit Analyte Unit Limits 0.0990 0.07941 Benzene <0.00201 U mg/Kg 80 70 - 130 0 35 0.08542 Toluene <0.00201 0.0990 mg/Kg 86 70 - 130 5 35 Ethylbenzene <0.00201 U 0.0990 0.08183 mg/Kg 83 70 - 130 13 35 0.198 0.1775 90 70 - 130 35 m-Xylene & p-Xylene <0.00402 U mg/Kg 17 0.0990 <0.00201 U\*+ 0.1015 70 - 130 o-Xylene mg/Kg 103 16

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: MB 880-43969/5-A

**Matrix: Solid** 

Analysis Batch: 43959

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43969

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/16/23 09:18	01/16/23 11:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/16/23 09:18	01/16/23 11:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/16/23 09:18	01/16/23 11:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/16/23 09:18	01/16/23 11:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/16/23 09:18	01/16/23 11:30	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/16/23 09:18	01/16/23 11:30	1

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	01/16/23 09:18	01/16/23 11:30	1
1,4-Difluorobenzene (Surr)	90		70 - 130	01/16/23 09:18	01/16/23 11:30	1

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

Lab Sample ID: MB 880-43908/1-A

**Matrix: Solid** 

Analysis Batch: 43947

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

Prep Batch: 43908

Result Qualifier RL Unit Prepared Analyzed <50.0 U 50.0 mg/Kg 01/13/23 13:08 01/15/23 08:29 Gasoline Range Organics

(GRO)-C6-C10

Analyte

Client: Ensolum

Job ID: 890-3828-1 SDG: 03D2024136

Prep Type: Total/NA

Prep Batch: 43908

Dil Fac

Dil Fac

Client Sample ID: Method Blank

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

Lab Sample ID: MB 880-43908/1-A **Matrix: Solid** 

Lab Sample ID: LCS 880-43908/2-A

**Matrix: Solid** 

Analysis Batch: 43947

Project/Site: Dominator Fed 25 CTB

Analysis Batch: 43947

MB MB

Analyte Result Qualifier RL Unit Prepared Analyzed <50.0 U 50.0 01/13/23 13:08 01/15/23 08:29 Diesel Range Organics (Over mg/Kg C10-C28) 50.0 01/13/23 13:08 01/15/23 08:29 Oll Range Organics (Over C28-C36) <50.0 U mg/Kg

MB MB

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 167 S1+ 70 - 130 203 S1+ 70 - 130 o-Terphenyl

01/13/23 13:08 01/15/23 08:29

Prepared

01/13/23 13:08

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

Analyzed

01/15/23 08:29

Prep Batch: 43908

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1045 105 70 - 130 mg/Kg (GRO)-C6-C10 1000 972.8 Diesel Range Organics (Over mg/Kg 97 70 - 130C10-C28)

LCS LCS

Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 111 o-Terphenyl 127 70 - 130

Lab Sample ID: LCSD 880-43908/3-A

**Matrix: Solid Analysis Batch: 43947**  Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Prep Batch: 43908

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	1027		mg/Kg		103	70 - 130	2	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	981.4		mg/Kg		98	70 - 130	1	20	
C10-C28)										

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 110 70 - 130 o-Terphenyl 132 S1+ 70 - 130

Lab Sample ID: 890-3793-A-1-D MS

**Matrix: Solid** 

Analysis Batch: 43947

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

Prep Batch: 43908

	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	998	872.4		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1034		mg/Kg		102	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	100		70 - 130

Client: Ensolum Job ID: 890-3828-1 Project/Site: Dominator Fed 25 CTB

SDG: 03D2024136

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

107

221

Lab Sample ID: 890-3793-A-1 Matrix: Solid Analysis Batch: 43947	1-E MSD					C	lient Sa	ample IC	•	oike Dup Type: To Batch:	tal/NA
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	901.5		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1119		mg/Kg		111	70 - 130	8	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	96		70 - 130								

### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCSD 880-43971/3-A

**Matrix: Solid** 

Chloride

naturia Databi 44447

Lab Sample ID: 890-3828-1 MS

o-Terphenyl

Lab Sample ID: MB 880-43971/1-A Matrix: Solid Analysis Batch: 44147						Client S	ample ID: Metho Prep Type:	
•	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			01/17/23 10:03	

70 - 130

Lab Sample ID. LCS 660-4597 III	4-A		Chefit Sample ID. Lab Control Sample
Matrix: Solid			Prep Type: Soluble
Analysis Batch: 44147			
	Spike	LCS LCS	%Rec

	Opike	L03	LUU				/01 <b>\C</b> C	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	254.4		mg/Kg		102	90 - 110	

Analysis Batch: 44147									
	Spike	LCSD	LCSD			%Rec		RPD	
Analyte	Added	Result	Qualifier Unit	t D	%Rec	Limits	RPD	Limit	
Chloride	250	254 6	ma/	/Ka	102	90 - 110		20	

Analysis Batch: 44147									Prep	Type: Soluble
•	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	221		251	479.4		mg/Kg		103	90 - 110	

Lab Sample ID: 890-3828-1 MSD Matrix: Solid Analysis Batch: 44147											ample ID: p Type: So	
-	Sample	Sample	Spike	MSD	MSD					%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	ı	)	%Rec	Limits	RPD	Limit

251

479.1

mg/Kg

**Eurofins Carlsbad** 

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

103

90 - 110

**Prep Type: Soluble** 

Client Sample ID: FS01

### **QC Association Summary**

Client: Ensolum Job ID: 890-3828-1
Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

**GC VOA** 

Prep Batch: 43913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3828-1	FS01	Total/NA	Solid	5035	
890-3828-2	FS02	Total/NA	Solid	5035	
890-3828-3	FS03	Total/NA	Solid	5035	
MB 880-43913/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43913/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43913/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3828-1 MS	FS01	Total/NA	Solid	5035	
890-3828-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 43959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3828-1	FS01	Total/NA	Solid	8021B	43913
890-3828-2	FS02	Total/NA	Solid	8021B	43913
890-3828-3	FS03	Total/NA	Solid	8021B	43913
MB 880-43913/5-A	Method Blank	Total/NA	Solid	8021B	43913
MB 880-43969/5-A	Method Blank	Total/NA	Solid	8021B	43969
LCS 880-43913/1-A	Lab Control Sample	Total/NA	Solid	8021B	43913
LCSD 880-43913/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43913
890-3828-1 MS	FS01	Total/NA	Solid	8021B	43913
890-3828-1 MSD	FS01	Total/NA	Solid	8021B	43913

Prep Batch: 43969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-43969/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 44169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3828-1	FS01	Total/NA	Solid	Total BTEX	
890-3828-2	FS02	Total/NA	Solid	Total BTEX	
890-3828-3	FS03	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Prep Batch: 43908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3828-1	FS01	Total/NA	Solid	8015NM Prep	
890-3828-2	FS02	Total/NA	Solid	8015NM Prep	
890-3828-3	FS03	Total/NA	Solid	8015NM Prep	
MB 880-43908/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43908/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43908/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3793-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3793-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3828-1	FS01	Total/NA	Solid	8015B NM	43908
890-3828-2	FS02	Total/NA	Solid	8015B NM	43908
890-3828-3	FS03	Total/NA	Solid	8015B NM	43908
MB 880-43908/1-A	Method Blank	Total/NA	Solid	8015B NM	43908
LCS 880-43908/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43908

**Eurofins Carlsbad** 

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Released to Imaging: 3/22/2023 10:22:05 AM

### **QC Association Summary**

Client: EnsolumJob ID: 890-3828-1Project/Site: Dominator Fed 25 CTBSDG: 03D2024136

### GC Semi VOA (Continued)

### **Analysis Batch: 43947 (Continued)**

Lab Samp	ole ID Cli	ient Sample ID	Prep Type	Matrix	Method Pr	ep Batch
LCSD 880	)-43908/3-A Lat	b Control Sample Dup	Total/NA	Solid	8015B NM	43908
890-3793-	A-1-D MS Ma	atrix Spike	Total/NA	Solid	8015B NM	43908
890-3793-	A-1-E MSD Ma	atrix Spike Duplicate	Total/NA	Solid	8015B NM	43908

### Analysis Batch: 44062

<b>Lab Sample ID</b> 890-3828-1	Client Sample ID FS01	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-3828-2	FS02	Total/NA	Solid	8015 NM	
890-3828-3	FS03	Total/NA	Solid	8015 NM	

### HPLC/IC

### Leach Batch: 43971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3828-1	FS01	Soluble	Solid	DI Leach	_
890-3828-2	FS02	Soluble	Solid	DI Leach	
890-3828-3	FS03	Soluble	Solid	DI Leach	
MB 880-43971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3828-1 MS	FS01	Soluble	Solid	DI Leach	
890-3828-1 MSD	FS01	Soluble	Solid	DI Leach	

### Analysis Batch: 44147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3828-1	FS01	Soluble	Solid	300.0	43971
890-3828-2	FS02	Soluble	Solid	300.0	43971
890-3828-3	FS03	Soluble	Solid	300.0	43971
MB 880-43971/1-A	Method Blank	Soluble	Solid	300.0	43971
LCS 880-43971/2-A	Lab Control Sample	Soluble	Solid	300.0	43971
LCSD 880-43971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43971
890-3828-1 MS	FS01	Soluble	Solid	300.0	43971
890-3828-1 MSD	FS01	Soluble	Solid	300.0	43971

Job ID: 890-3828-1

Client: Ensolum Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

**Client Sample ID: FS01** Lab Sample ID: 890-3828-1 Date Collected: 01/11/23 11:45

**Matrix: Solid** Date Received: 01/11/23 15:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	43913	01/13/23 14:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43959	01/16/23 22:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44169	01/17/23 14:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			44062	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43908	01/13/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 17:39	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 10:29	CH	EET MID

Lab Sample ID: 890-3828-2 **Client Sample ID: FS02** Date Collected: 01/11/23 11:50 **Matrix: Solid** 

Date Received: 01/11/23 15:02

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 5.03 g 01/13/23 14:03 Total/NA Prep 5 mL 43913 MNR EET MID 8021B Total/NA 5 mL 43959 01/16/23 22:49 **EET MID** Analysis 1 5 mL MNR Total/NA Total BTEX 44169 01/17/23 14:25 SM Analysis 1 **EET MID** Total/NA Analysis 8015 NM 44062 01/16/23 16:51 ΑJ **EET MID** Total/NA 8015NM Prep 43908 01/13/23 13:08 Prep 10.02 g 10 mL DM EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 43947 01/15/23 18:00 ΑJ **EET MID** Soluble 5.03 g 43971 01/16/23 09:22 KS Leach DI Leach 50 mL **EET MID** Soluble Analysis 300.0 1 44147 01/17/23 10:48 СН **EET MID** 

Lab Sample ID: 890-3828-3 **Client Sample ID: FS03** 

Date Collected: 01/11/23 12:50 Date Received: 01/11/23 15:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43913	01/13/23 14:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43959	01/16/23 23:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44169	01/17/23 14:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			44062	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43908	01/13/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 18:21	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 10:54	CH	EET MID

**Laboratory References:** 

EET 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: 890-3828-1
Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

Laboratory: Eurofins Midland

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

Authority Texas		ogram	Identification Number	Expiration Date		
		ELAP	T104704400-22-25	06-30-23		
The following analytes the agency does not of	· '	it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes fo		
Analysis Method	D M () 1	N.A Andre				
Alialysis Melliou	Prep Method	Matrix	Analyte			
8015 NM	Ргер метпоа	Solid	Analyte Total TPH			

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### **Method Summary**

Client: Ensolum Job ID: 890-3828-1
Project/Site: Dominator Fed 25 CTB SDG: 03D2024136

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** 

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### **Sample Summary**

Client: Ensolum

Project/Site: Dominator Fed 25 CTB

Job ID: 890-3828-1

SDG: 03D2024136

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Dep
890-3828-1	FS01	Solid	01/11/23 11:45	01/11/23 15:02	6'
890-3828-2	FS02	Solid	01/11/23 11:50	01/11/23 15:02	6'
890-3828-3	FS03	Solid	01/11/23 12:50	01/11/23 15:02	12'

Circle Method(s) and Metal

Relinquished by: (Signature)

Received by: (Signature)

1700

-11-23

(SOB)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020.2

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### eurofins **Environment Testing** Xenco

Phone:

City, State ZIP:

Carlsbad, NM 88220 3122 Nat'l Parks Highway

City, State ZIP:

Carlsbad, NM 88220 3122 Nat'l Parks Highway

Reporting: Level III 🗎 Level III 🗎 PST/UST 🗎 TRRP 📗

Level IV

State of Project: NM

Program: UST/PST ☐PRP ☐Brownfields ☐RC

uperfund

www.xenco.com

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**Work Order Comments** 

Bill to: (if different) Company Name:

Ensolum, LLC Kalei Jennings

Address:

Company Name:

Ensolum, LLC Josh Adams

roject Manager.

## Chain of Custody

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

tice: Signature of this document service. Eurofins Xenco will be Eurofins Xenco. A minimum ch	ircle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010				758 8	1502	FS01	Sample Identification	otal Containers:	ample Custody Seals:	cooler Custody Seals:	samples Received Intact:	SAMPLE RECEIPT	Ŏ.#	sampler's Name:	Project Location: 32	noject Number: 050	roject Name: DOM	hone: 303-51
office: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Euronins Xenco, its artiliates and subcontractors. It assigns standard terms and continuous service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	il(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As	200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba				S 01-11-23 1950 12" C 1 1	5 01-11-23 1150 16" 10 11	5 01-11-23 1145 16" 10 11 11	n Matrix Sampled Sampled Depth Comp Cont	Corrected Temperature: 4.2	Yes No NUA Temperature Reading: (+)	Yes No AIA Correction Factor:	Yes No Thermometer ID:	Temp Blank: Yes No Wet Ice: Yes No net	_	Julianna Falcomata TAT starts the day received by	09511,-103.53140 Due Date:	7024/36	Note Fed 25 CTB / Turn Around	303-517-8437 Email:  iadams@ensolum.com, kjennings@ensolum.com
Eurofins Xenco, its amiliates and subcontractors, it assigns statuant terms and or expenses incurred by the client if such losses are due to circumstances beyond the to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U H	K Se							CHLOR	1	s co 2828 Chain of Custody								ANALYSIS REQUEST	nings@ensolum.com
e control r negotiated.	Hg: 1631 / 245.1 / 7470 / 7471	Ag SiO <sub>2</sub> Na Sr TI Sn U V Zn					Marr	700 800 B	Sample Comments	NaOH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	NaHSO <sub>4</sub> : NABIS	H₃PO₄: HP	H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na	HCL: HC HNO <sub>3</sub> : HN	<u>_</u>	None: NO DI Water: H <sub>2</sub> O	Preservative Codes	ADaPT Other:
10. 2/2	2/20	122	10.22	.05 4	(M			Ρ	age 2	20 0	of 2	22								

Work Order No:

### **Login Sample Receipt Checklist**

 Client: Ensolum
 Job Number: 890-3828-1

 SDG Number: 03D2024136

Login Number: 3828 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	

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### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3828-1 SDG Number: 03D2024136

Login Number: 3828
List Source: Eurofins Midland
List Number: 2
List Creation: 01/13/23 10:36 AM

Creator: Rodriguez, Leticia

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

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<6mm (1/4").

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 197144

### **CONDITIONS**

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	197144
	Action Type:
	[C-141] Release Corrective Action (C-141)

### CONDITIONS

Created By		Condition Date
jnobui	Closure Report Approved.	3/22/2023