

March 24, 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 Zia Hills 19-1 Incident Number NAPP2216037138 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 an approved *Remediation Work Plan (RWP)* submitted on December 28, 2022. This *Closure Request* provides an update to the depth to groundwater determination and soil sampling activities performed at the Zia Hills 19-1 (Site). Based on the results presented in this report, COG is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2216037138.

All of the release details regarding the incident, Site characterization, and remediation conducted can be referenced in the original *Closure Request* submitted on November 11, 2022. On November 29, 2022, NMOCD denied the original *Closure Request* for Incident Number NAPP2216037138 for the following reason:

Closure Report Denied. The depth to groundwater has not be adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringest levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater. Areas SS04, SS06, SS07, & FS05 require additional delineation. Please resubmit a revised closure report to the OCD portal by December 29,2022.

Although the denial requested submittal of a closure report, it was not possible to coordinate land access, permit a boring with the New Mexico Office of the State Engineer (NMOSE), schedule fieldwork with limited drillers' availability, then collect and analyze new data within 30 days. The *RWP* was submitted in lieu of a closure report. The *RWP* proposed installation of a boring to investigate depth to water and confirm the Closure Criteria and proposed collection of samples outside the release area for additional lateral delineation at soil samples SS04, SS06, and SS07. In regards to additional delineation at FS05, soil represented by excavation confirmation sample FS05 was removed during excavation. Removal of the soil was confirmed with collection of FS05A, collected approximately <sup>3</sup>/<sub>4</sub>-foot deeper than

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 601 North Marienfeld Street, Suite 400 | Midland, TX 78209 | ensolum.com COG Operating, LLC Closure Request Zia Hills 19-1 March 24, 2023

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FS05. Results from confirmation sample FS05A met the reclamation requirement for total petroleum hydrocarbons (TPH) and chloride.

The *RWP* was approved by NMOCD on January 24, 2023, via email with no conditions. Continuing below is a description of work completed following the approval of the *RWP*.

#### DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On February 15, 2023, Ensolum personnel were at the Site to perform lateral delineation activities as detailed in the approved *RWP*. Three delineation soil samples (SS04, SS06, and SS07) were collected around the release extent at a depth of approximately 0.5 feet bgs to assess the lateral extent of the release. Soil from the delineation samples was field screened for volatile organic compounds (VOCs) utlizing a calibrated photoionization detector (PID) and chloride utilizing Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips. The delineation soil sample locations are depicted in Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COCs): benzene, toluene ethylbenezene, and total xylenes (BTEX) following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for delineation soil samples SS04, SS06, and SS07, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully define the lateral extent of the release. Laboratory analytical results are provided on Table 1 and laboratory analytical reports are included as Appendix A.

#### DEPTH TO WATER DETERMINATION

On February 15, 2023, a borehole (BH01) was advanced to a depth of 110 feet bgs via air rotary drill rig. The borehole was located approximately 0.3 miles southeast of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix B. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed groundwater beneath the Site is greater than 100 feet bgs. The borehole was properly abandoned using hydrated bentonite chips.

#### **CLOSURE REQUEST**

Delineation activities and depth to groundwater determination were carried out and confirmed as approved in the *RWP*. Laboratory analytical results for the delineation soil samples indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. A borehole was drilled to 110 feet bgs at the Site and did not encounter groundwater, confirming depth to groundwater is greater than 100 feet bgs. As such, COG respectfully requests closure for Incident Number NAPP2216037138. The Final C-141 is included as Appendix C.



COG Operating, LLC Closure Request Zia Hills 19-1

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

Sincerely, **Ensolum, LLC** 

adrie Treen

Hadlie Green Project Manager

Daniel R. Moir, PG Senior Managing Geologist

cc: Charles Beauvais, COG Operating, LLC Jacob Laird, COG Operating, LLC Bureau of Land Management

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Delineation Soil Sample Locations
- Table 1Soil Sample Analytical Results
- Appendix A Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix B Lithologic / Soil Sampling Log
- Appendix C Final C-141





**FIGURES** 

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# TABLES

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## **ENSOLUM**

				G	TABLE 1 LE ANALYTICA ZIA Hills 19-1 OG Operating, LI County, New Me	.c				
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Clo	osure Criteria (N	IMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
				Deli	neation Soil Sam	ples	•			
SS04	02/15/2023	0.5	<0.00200	<0.00400	<50.0	87.7	<50.0	87.7	87.7	363
SS06	02/15/2023	0.5	<0.00202	0.0119	<49.8	93.9	<49.8	93.9	93.9	342
SS07	02/15/2023	0.5	<0.00202	0.0183	<49.9	76.8	<49.9	76.8	76.8	355

Notes:

bgs: below ground surface

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

DRO: Diesel Range Organics

GRO: Gasoline Range Organics

mg/kg: milligrams per kilogram

NMAC: New Mexico Administrative Code

NMOCD: New Mexico Oil Conservation Division

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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# APPENDIX A

Laboratory Analytical Reports & Chain of Custody Documentation

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**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/23/2023 3:28:22 PM

# JOB DESCRIPTION

Zia Hills 1AB SDG NUMBER 03D2024059

# **JOB NUMBER**

890-4123-1

ED FC adlie Gre Ensol rienfeld Suite 4 exas 797 23 3:28:22 RIPTIC a Hills 1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.

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# **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

RAMER

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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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	Definitions/Glossary		
Client: Ensolu Project/Site: Z		Job ID: 890-4123-1 SDG: 03D2024059	
-		3DG. 03D2024039	_
Qualifiers			
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		Ę
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA	N Contraction of the second		
Qualifier	Qualifier Description		
*1	LCS/LCSD RPD exceeds control limits.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		8
HPLC/IC			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
	Indicates a Dilution. De analysis. De avtraction, ex additional Initial matals/anian analysis of the comple		

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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#### Job ID: 890-4123-1 SDG: 03D2024059

#### Job ID: 890-4123-1

Project/Site: Zia Hills 1AB

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-4123-1

#### Receipt

The sample was received on 2/17/2023 8:20 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 2.2°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS07 (890-4123-1).

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-46929 and analytical batch 880-46928 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-47003 and analytical batch 880-46994 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

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

#### HPLC/IC

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

Job ID: 890-4123-1 SDG: 03D2024059

## Client Sample ID: SS07

Date Collected: 02/15/23 14:30 Date Received: 02/17/23 08:20

Sample Depth: 0.5'

Project/Site: Zia Hills 1AB

Client: Ensolum

SDG: 03D202405

#### Lab Sample ID: 890-4123-1 Matrix: Solid

. 30110

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U F2 F1	0.00202	mg/Kg		02/22/23 09:16	02/23/23 03:12	1
Toluene	0.00490	F1	0.00202	mg/Kg		02/22/23 09:16	02/23/23 03:12	1
Ethylbenzene	0.00362		0.00202	mg/Kg		02/22/23 09:16	02/23/23 03:12	1
m-Xylene & p-Xylene	0.00658	F1	0.00404	mg/Kg		02/22/23 09:16	02/23/23 03:12	1
o-Xylene	0.00316	F1	0.00202	mg/Kg		02/22/23 09:16	02/23/23 03:12	1
Xylenes, Total	0.00974	F1	0.00404	mg/Kg		02/22/23 09:16	02/23/23 03:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			02/22/23 09:16	02/23/23 03:12	1
1,4-Difluorobenzene (Surr)	103		70 - 130			02/22/23 09:16	02/23/23 03:12	1
Method: TAL SOP Total BTEX - 1	otal BTEX Calo	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0183		0.00404	mg/Kg			02/23/23 12:18	1
Method: SW846 8015 NM - Diese	Range Organ	ics (DRO) ((	3C)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	76.8		49.9	mg/Kg			02/23/23 16:21	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9		49.9	mg/Kg		02/23/23 09:12	02/23/23 11:41	1
Diesel Range Organics (Over	76.8	*1	49.9	mg/Kg		02/23/23 09:12	02/23/23 11:41	1
C10-C28)	<49.9	U	49.9	mg/Kg		02/23/23 09:12	02/23/23 11:41	1
Oll Range Organics (Over C28-C36)	-+0.0							
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36) Surrogate		Qualifier	Limits 70 - 130			Prepared 02/23/23 09:12	Analyzed 02/23/23 11:41	Dil Fac
Oll Range Organics (Over C28-C36)	%Recovery	Qualifier				· · · · · · · · · · · · · · · · · · ·		Dil Fac 1 1
Oll Range Organics (Over C28-C36) <i>Surrogate</i> <i>1-Chlorooctane</i> <i>o-Terphenyl</i>	% <b>Recovery</b> 87 93		70 - 130 70 - 130			02/23/23 09:12	02/23/23 11:41	1
Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	%Recovery 87 93 Chromatograp		70 - 130 70 - 130	Unit	D	02/23/23 09:12	02/23/23 11:41	1

Eurofins Carlsbad

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#### Job ID: 890-4123-1 SDG: 03D2024059

Prep Type: Total/NA

Prep Type: Total/NA

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

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
_ab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-4123-1	SS07	105	103		÷
890-4123-1 MS	SS07	82	85		
890-4123-1 MSD	SS07	100	108		ŝ
LCS 880-46929/1-A	Lab Control Sample	92	107		
LCSD 880-46929/2-A	Lab Control Sample Dup	103	110		1
MB 880-46868/5-A	Method Blank	82	104		
MB 880-46929/5-A	Method Blank	85	99		
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
123-1	SS07	87	93	
23-1 MS	SS07	107	102	
123-1 MSD	SS07	95	89	
-47003/2-A	Lab Control Sample	107	116	
880-47003/3-A	Lab Control Sample Dup	75	85	
30-47003/1-A	Method Blank	110	131 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Carlsbad

Client: Ensolum

## **QC Sample Results**

Job ID: 890-4123-1 SDG: 03D2024059

Project/Site: Zia Hills 1AB

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

Lab Sample ID: MB 880-46868	B/ <b>5-A</b>							Client S	ample ID: Meth		
Matrix: Solid									Prep Type:		
Analysis Batch: 46928									Prep Bate	ch: 46	6868
		В МВ									
Analyte	Resu	t Qualifier	R		Unit		D	Prepared	Analyzed	Di	il Fac
Benzene	<0.0020		0.0020	0	mg/K	g		02/21/23 14:34	02/22/23 11:49		1
Toluene	<0.0020	) U	0.0020	0	mg/K	g		02/21/23 14:34	02/22/23 11:49		1
Ethylbenzene	<0.0020	D U	0.0020	0	mg/K	g		02/21/23 14:34	02/22/23 11:49		1
m-Xylene & p-Xylene	<0.0040	U U	0.0040	0	mg/K	g		02/21/23 14:34	02/22/23 11:49		1
o-Xylene	< 0.0020	U C	0.0020	0	mg/K	g		02/21/23 14:34	02/22/23 11:49		1
Xylenes, Total	<0.0040	U U	0.0040	0	mg/K	g		02/21/23 14:34	02/22/23 11:49		1
	М	3 <i>MB</i>									
Surrogate	%Recover	y Qualifier	Limits					Prepared	Analyzed	Di	il Fac
4-Bromofluorobenzene (Surr)	8	2	70 - 130	_				02/21/23 14:34	02/22/23 11:49		1
1,4-Difluorobenzene (Surr)	10	4	70 - 130					02/21/23 14:34	02/22/23 11:49		1
Lab Sample ID: MB 880-46929	9/5-A							Client S	ample ID: Meth	od B	lank
Matrix: Solid									Prep Type:		
Analysis Batch: 46928									Prep Bate		
	М	в мв									
Analyte	Resu	t Qualifier	R	L	Unit		D	Prepared	Analyzed	Di	il Fac
Benzene	<0.0020	D U	0.0020	0	mg/K	q	_	02/22/23 09:16	02/23/23 02:51		
Toluene	<0.0020	D U	0.0020		mg/K	-		02/22/23 09:16	02/23/23 02:51		1
Ethylbenzene	<0.0020		0.0020		mg/K	-		02/22/23 09:16	02/23/23 02:51		
m-Xylene & p-Xylene	<0.0040		0.0040		mg/K			02/22/23 09:16	02/23/23 02:51		1
o-Xylene	<0.0020		0.0020		mg/K	-		02/22/23 09:16	02/23/23 02:51		
Xylenes, Total	<0.0040		0.0040		mg/K	-		02/22/23 09:16	02/23/23 02:51		1
	0.0010		0.0010	•		9		02,22,20 00110	02/20/20 02:01		
	M	B MB									
Surrogate	%Recover		Limits	_				Prepared	Analyzed	Di	il Fac
4-Bromofluorobenzene (Surr)	8		70 - 130					02/22/23 09:16	02/23/23 02:51		1
1,4-Difluorobenzene (Surr)	9	9	70 - 130					02/22/23 09:16	02/23/23 02:51		1
Lab Sample ID: LCS 880-4692	29/1-A						С	lient Sample	ID: Lab Contro	I San	nple
Matrix: Solid									Prep Type:		
Analysis Batch: 46928									Prep Bate		
-			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	0.1011		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.09373		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1915		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09836		mg/Kg		98	70 - 130		
		_				0 0					
Surrogate	LCS LC %Recovery Qu		Limits								
4-Bromofluorobenzene (Surr)	92		70 - 130								
1,4-Difluorobenzene (Surr)	107		70 - 130								
Lab Sample ID: LCSD 880-469	929/2-4					CIE	ant	Sample ID: I	ab Control Sa	nnlo	Dur
Matrix: Solid						CIR	ant		Prep Type:	- C	
									Prep Bate		
Analysis Batch: 46928											JJZJ
Analysis Batch: 46928			Snike		LCSD						RPD
Analysis Batch: 46928			Spike Added		LCSD Qualifier	Unit		D %Rec	%Rec Limits RI	חי	RPD Limit

Eurofins Carlsbad

## **QC Sample Results**

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6 7 8

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

Lab Sample ID: LCSD 880-4692	<b>:9/2-A</b>					Clie	nt San	ple ID:	Lab Contro		-
Matrix: Solid									Prep T	ype: To	tal/NA
Analysis Batch: 46928									Prep	Batch:	46929
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Toluene			0.100	0.1089		mg/Kg		109	70 - 130	7	35
Ethylbenzene			0.100	0.1027		mg/Kg		103	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2128		mg/Kg		106	70 - 130	11	3
o-Xylene			0.100	0.1094		mg/Kg		109	70 - 130	11	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	103		70 - 130								
1,4-Difluorobenzene (Surr)	110		70 - 130								
Lab Sample ID: 890-4123-1 MS									Client Sar	nple ID:	SS0
Matrix: Solid										· ype: To	
Analysis Batch: 46928										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00202	U F2 F1	0.101	0.04951	F1	mg/Kg		49	70 - 130		
Toluene	0.00490	F1	0.101	0.07116	F1	mg/Kg		66	70 - 130		
Ethylbenzene	0.00362		0.101	0.07403		mg/Kg		70	70 - 130		
m-Xylene & p-Xylene	0.00658	F1	0.202	0.1234	F1	mg/Kg		58	70 - 130		
o-Xylene	0.00316	F1	0.101	0.06386	F1	mg/Kg		60	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	82		70 - 130								
1,4-Difluorobenzene (Surr)	85		70 - 130								
Lab Sample ID: 890-4123-1 MSI	D								Client Sar	nple ID:	<b>SS0</b> 7
Matrix: Solid									Prep T	ype: To	tal/N/
Analysis Batch: 46928									Prep	Batch:	46929
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene	<0.00202	U F2 F1	0.0992	0.09288	F2	mg/Kg		93	70 - 130	61	3
Toluene	0.00490	F1	0.0992	0.09288		mg/Kg		89	70 - 130	26	3
Ethylbenzene	0.00362		0.0992	0.08391		mg/Kg		81	70 - 130	13	3
m-Xylene & p-Xylene	0.00658	F1	0.198	0.1714		mg/Kg		83	70 - 130	33	3
o-Xylene	0.00316	<b>F</b> 4	0.0992	0.08869		mg/Kg		86	70 - 130	33	3

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

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

Lab Sample ID: MB 880-47003/1-A Matrix: Solid Analysis Batch: 46994	МВ	МВ				Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Fotal/NA
Analyte Gasoline Range Organics (GRO)-C6-C10	<b>Result</b> <50.0	Qualifier	<b>RL</b> 50.0	 Unit mg/Kg	<u>D</u>	Prepared 02/23/23 09:12	Analyzed 02/23/23 08:36	Dil Fac 1

Eurofins Carlsbad

Client: Ensolum

Project/Site: Zia Hills 1AB

## **QC Sample Results**

#### Job ID: 890-4123-1 SDG: 03D2024059

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

Lab Sample ID: MB 880-47003/1 Matrix: Solid	- <b>A</b>									Client S	ample ID:   Prep T	Method Type: To	
Analysis Batch: 46994												Batch:	
-		MB	МВ										
Analyte	Re	esult	Qualifier	R		L	Jnit	D	Pr	repared	Analyz	ed	Dil Fa
Diesel Range Organics (Over	<	50.0	U	50.	0	n	ng/Kg		02/23	3/23 09:12	02/23/23	08:36	
C10-C28) Oll Range Organics (Over C28-C36)	<	50.0	U	50.	0	n	ng/Kg		02/23	3/23 09:12	02/23/23	08:36	
		00.0	0		0		ilg/ilg		02/20	5/20 00.12	02/20/20	00.00	
			МВ										
Surrogate	%Reco		Qualifier	Limits	_			-		repared	Analyz		Dil Fa
1-Chlorooctane		110	64	70 - 130						3/23 09:12			
o-Terphenyl		131	S1+	70 - 130					02/2、	3/23 09:12	02/23/23	08:36	
Lab Sample ID: LCS 880-47003/	2-A							CI	lient	Sample	ID: Lab Co	ontrol S	Sampl
Matrix: Solid												Type: To	
Analysis Batch: 46994												Batch:	
-				Spike	LCS	LCS					%Rec		
Analyte				Added	Result	Qualifi	er Unit		D	%Rec	Limits		
Gasoline Range Organics				1000	1174		mg/Kg		_	117	70 - 130		
(GRO)-C6-C10				4000	44.00					110	70 400		
Diesel Range Organics (Over C10-C28)				1000	1103		mg/Kg			110	70 - 130		
610-620)													
	LCS												
			lifiar	Limits									
	%Recovery	Qual											
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700	107 116	Qual		70 - 130 70 - 130 70 - 130			CI	ient	Sam	ple ID: L	ab Contro. Pren T		
1-Chlorooctane p-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid	107 116	Qual	<u></u>	70 - 130			CI	ient	Sam	ple ID: L	Prep T	I Samp Type: To Batch:	otal/N
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994	107 116	Qual	<u></u>	70 - 130 70 - 130 <b>Spike</b>		LCSD		ient :		-	Prep T Prep %Rec	ype: To Batch:	otal/N/ 4700 RPI
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte	107 116	Qual		70 - 130 70 - 130 Spike Added	Result	Qualifi	er Unit	ient	Sam	%Rec	Prep 1 Prep %Rec Limits	Batch:	otal/N 4700 RPI Lim
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics	107 116	Qual		70 - 130 70 - 130 <b>Spike</b>		Qualifi		ient :		-	Prep T Prep %Rec	ype: To Batch:	otal/N/ 4700 RPI Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10	107 116	Qual		70 - 130 70 - 130 Spike Added	Result	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep 1 Prep %Rec Limits	Batch:	20000000000000000000000000000000000000
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116	<u>Qual</u>		70 - 130 70 - 130 <b>Spike</b> Added	<b>Result</b> 908.0	Qualifi *1	er Unit	ient :		%Rec	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 26	2 4700 RPI Lim
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116 <b>3/3-A</b>			70 - 130 70 - 130 <b>Spike</b> Added	<b>Result</b> 908.0	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 26	20 <b>tal/N/</b> 47003 RPI Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	107 116 <b>3/3-A</b> <i>LCSD</i>	LCSI		70 - 130 70 - 130 <b>Spike</b> Added 1000	<b>Result</b> 908.0	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 26	2 4700 RPI Lim
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	107 116 <b>3/3-A</b>	LCSI		70 - 130 70 - 130 <b>Spike</b> Added	<b>Result</b> 908.0	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 26	20000000000000000000000000000000000000
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	107 116 3/3-A <i>LCSD</i> %Recovery	LCSI		70 - 130 70 - 130 <b>Spike</b> Added 1000 1000	<b>Result</b> 908.0	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 26	20000000000000000000000000000000000000
Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-47003 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	107 116 <b>3/3-A</b> <i>LCSD</i> %Recovery 75	LCSI		70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 Limits 70 - 130	<b>Result</b> 908.0	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep 1 Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch: RPD 26 31	20000000000000000000000000000000000000
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS	107 116 <b>3/3-A</b> <i>LCSD</i> %Recovery 75	LCSI		70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 Limits 70 - 130	<b>Result</b> 908.0	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep 7 Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch: <u>RPD</u> 26 31 mple ID	2 <b>4700</b> <b>RPI</b> <u>Lim</u> 2 2 <b>SS0</b>
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid	107 116 <b>3/3-A</b> <i>LCSD</i> %Recovery 75	LCSI		70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 Limits 70 - 130	<b>Result</b> 908.0	Qualifi *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid	107 116 <b>3/3-A</b> <i>LCSD</i> %Recovery 75 85	LCSI Qual	D lifier	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 1000 <i>Limits</i> 70 - 130 70 - 130	<b>Result</b> 908.0 806.6	Qualifi *1 *1	<mark>ier Unit</mark> mg/Kg	ient :		%Rec	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Client Sar Prep T Prep	Type: To Batch: <u>RPD</u> 26 31 mple ID	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85	LCSI Qual	D lifier	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result 908.0 806.6 MS	Qualifi *1 *1 MS	i <mark>er Unit</mark> mg/Kg mg/Kg	ient :	<u>D</u> .	%Rec 91 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994 Analyte	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85 Sample Result	LCSI Qual Sam Qual	D lifier	70 - 130 70 - 130 70 - 130 <b>Spike</b> 1000 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result           908.0           806.6           MS           Result	Qualifi *1 *1	ier <u>Unit</u> mg/Kg mg/Kg	ient :		%Rec 91 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85	LCSI Qual Sam Qual	D lifier	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result 908.0 806.6 MS	Qualifi *1 *1 MS	i <mark>er Unit</mark> mg/Kg mg/Kg	ient :	<u>D</u> .	%Rec 91 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85 Sample Result	LCSI Qual Qual U *1	D lifier	70 - 130 70 - 130 70 - 130 <b>Spike</b> 1000 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result           908.0           806.6           MS           Result	Qualifi *1 *1 MS	ier <u>Unit</u> mg/Kg mg/Kg	ient :	<u>D</u> .	%Rec 91 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85 Sample Result <49.9	LCSI Qual Qual U *1	D lifier	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         5pike         70 - 130         70 - 130         70 - 130         999	Result           908.0           806.6           MS           Result           1211	Qualifi *1 *1 MS	ier Unit mg/Kg mg/Kg	ient :	<u>D</u> .	%Rec 91 81 81 81 119	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Client Sar Prep T Prep T %Rec Limits 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85 Sample Result <49.9	LCSI Qual Qual U *1 *1	D lifier	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         5pike         70 - 130         70 - 130         70 - 130         999	Result           908.0           806.6           MS           Result           1211	Qualifi *1 *1 MS	ier Unit mg/Kg mg/Kg	ient :	<u>D</u> .	%Rec 91 81 81 81 119	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Client Sar Prep T Prep T %Rec Limits 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85 Sample Result <49.9 76.8	LCSI Qual Qual U *1 *1 MS	D lifier	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         5pike         70 - 130         70 - 130         70 - 130         999	Result           908.0           806.6           MS           Result           1211	Qualifi *1 *1 MS	ier Unit mg/Kg mg/Kg	ient :	<u>D</u> .	%Rec 91 81 81 81 119	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Client Sar Prep T Prep T %Rec Limits 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2
1-Chlorooctane p-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: 890-4123-1 MS Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	107 116 3/3-A <i>LCSD</i> %Recovery 75 85 85 Sample Result <49.9 76.8 <i>MS</i>	LCSI Qual Qual U *1 *1 MS	D lifier	70 - 130 70 - 130 70 - 130 1000 1000 1000 1000 1000 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 999 999	Result           908.0           806.6           MS           Result           1211	Qualifi *1 *1 MS	ier Unit mg/Kg mg/Kg	ient :	<u>D</u> .	%Rec 91 81 81 81 119	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Client Sar Prep T Prep T %Rec Limits 70 - 130	Type: To Batch: 26 31 mple ID Type: To	2 2 2 2 2 2 2 2 2 2 2 2 2 2

Lab Sample ID: 890-4123-1 MSD

### **QC Sample Results**

MSD MSD

986.4

993.4

Result Qualifier

Unit

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

%Rec

97

92

Spike

Added

998

998

Limits

70 - 130

70 - 130

Analysis Batch: 46994

Gasoline Range Organics

Diesel Range Organics (Over

Matrix: Solid

(GRO)-C6-C10

Analyte

C10-C28)

Surrogate 1-Chlorooctane

o-Terphenyl

Matrix: Solid

Matrix: Solid

Analyte

Chloride

Analysis Batch: 46871

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46828/1-A

Lab Sample ID: LCS 880-46828/2-A

Sample Sample

<49.9 U\*1

76.8 \*1

MSD MSD

95

89

Qualifier

MB MB

<5.00 U

Result Qualifier

%Recovery

Result Qualifier

RPD

20

12

# **Client Sample ID: SS07** Prep Type: Total/NA Prep Batch: 47003 RPD Limit 20 20

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

Prepared	Analyzed	Dil Fac	
	02/21/23 15:17	1	
nt Sample I	D: Lab Control	Sample	

#### **Client S Prep Type: Soluble**

%Rec

Limits

70 - 130

70 - 130

Spike         LCS         LCS         %Rec           Analyte         Added         Result         Qualifier         Unit         D         %Rec         Limits           Chloride         250         236.5         mg/Kg         95         90 - 110	Analysis Batch: 46871							
		Spike	LCS	LCS				%Rec
Chloride         250         236.5         mg/Kg         95         90 - 110	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
	Chloride	250	236.5		mg/Kg		95	90 _ 110

RL

5.00

Lab Sample ID: LCSD 880-46828/3-A				Clier	nt Sam	ple ID:	Lab Contro		
Matrix: Solid							Prep	Type: Se	oluble
Analysis Batch: 46871									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.9		mg/Kg		98	90 _ 110	3	20

Lab Sample ID: 890-4120-A-1-B MS Matrix: Solid								Client		Matrix Spike Гуре: Soluble
Analysis Batch: 46871	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	<4.97	U	249	240.7		mg/Kg		95	90 - 110	

Lab Sample ID: 890-4120-A-1-0 Matrix: Solid Analysis Batch: 46871	S MSD					CI	ient Sa	ample ID	): Matrix Sp Prep	oike Dup Type: So	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	<4.97	U	249	240.4		mg/Kg		95	90 _ 110	0	20

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## **QC Association Summary**

Client: Ensolum Project/Site: Zia Hills 1AB

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Job ID: 890-4123-1 SDG: 03D2024059

#### **GC VOA**

#### Prep Batch: 46868

ep Batch: 46868					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-46868/5-A	Method Blank	Total/NA	Solid	5035	
nalysis Batch: 46928					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4123-1	SS07	Total/NA	Solid	8021B	46929
MB 880-46868/5-A	Method Blank	Total/NA	Solid	8021B	46868
MB 880-46929/5-A	Method Blank	Total/NA	Solid	8021B	46929
LCS 880-46929/1-A	Lab Control Sample	Total/NA	Solid	8021B	46929
LCSD 880-46929/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46929
890-4123-1 MS	SS07	Total/NA	Solid	8021B	46929
890-4123-1 MSD	SS07	Total/NA	Solid	8021B	46929
- Prep Batch: 46929					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4123-1	SS07	Total/NA	Solid	5035	
MB 880-46929/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46929/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46929/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4123-1 MS	SS07	Total/NA	Solid	5035	
890-4123-1 MSD	SS07	Total/NA	Solid	5035	
Analysis Batch: 47041					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4123-1	SS07	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 46994

Lab Sample ID 890-4123-1	Client Sample ID SS07	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 47003
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015B NM	47003
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47003
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47003
890-4123-1 MS	SS07	Total/NA	Solid	8015B NM	47003
890-4123-1 MSD	SS07	Total/NA	Solid	8015B NM	47003

#### Prep Batch: 47003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4123-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4123-1 MS	SS07	Total/NA	Solid	8015NM Prep	
890-4123-1 MSD	SS07	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 47105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4123-1	SS07	Total/NA	Solid	8015 NM	

## **QC** Association Summary

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4123-1 SDG: 03D2024059

#### HPLC/IC

#### Leach Batch: 46828

SolubleSolidDI LeachSolubleSolidDI LeachSolubleSolidDI LeachSolubleSolidDI LeachSolubleSolidDI LeachSolubleSolidDI LeachSolubleSolidDI LeachSolubleSolidDI Leach	
SolubleSolidDI LeachSolubleSolidDI LeachSolubleSolidDI Leach	
SolubleSolidDI LeachSolubleSolidDI Leach	
Soluble Solid DI Leach	
Soluble Solid DI Leach	
Prep Type Matrix Method	Prep Batch
Soluble Solid 300.0	46828
	SolubleSolid300.0SolubleSolid300.0SolubleSolid300.0SolubleSolid300.0SolubleSolid300.0SolubleSolid300.0

890-4123-1	5507	Soluble	Solid	300.0	46828
MB 880-46828/1-A	Method Blank	Soluble	Solid	300.0	46828
LCS 880-46828/2-A	Lab Control Sample	Soluble	Solid	300.0	46828
LCSD 880-46828/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46828
890-4120-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	46828
890-4120-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46828

Eurofins Carlsbad

Client: Ensolum Project/Site: Zia Hills 1AB

#### Client Sample ID: SS07 Date Collected: 02/15/23 14:30

Date Received: 02/17/23 08:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	46929	02/22/23 09:16	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46928	02/23/23 03:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47041	02/23/23 12:18	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47105	02/23/23 16:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 11:41	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	46828	02/21/23 09:25	KS	EET MID
Soluble	Analysis	300.0		1			46871	02/21/23 18:22	СН	EET MID

Laboratory References:

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

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Job ID: 890-4123-1 SDG: 03D2024059

## Lab Sample ID: 890-4123-1

Matrix: Solid

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum Project/Site: Zia Hills 1AB

Laboratory: Eurofins Midland

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

thority	P	rogram	Identification Number	Expiration Date
xas	N	IELAP	T104704400-22-25	06-30-23
The following analytes	are included in this report, b	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for v
the agency does not o	ffer certification.			
the agency does not o Analysis Method	ffer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

Job ID: 890-4123-1 SDG: 03D2024059

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Eurofins Carlsbad

## **Method Summary**

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4123-1 SDG: 03D2024059

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
EPA = US	STM International Environmental Protection Agency		
	'Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edi	tion, November 1986 And Its Updates.	
TAL SOP :	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences: = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		
	,		

#### Laboratory References:

Eurofins Carlsbad

## **Sample Summary**

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4123-1 SDG: 03D2024059

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-4123-1	SS07	Solid	02/15/23 14:30	02/17/23 08:20	0.5'	4
						5
						8
						9
						12
						13

Notice: Signature of this document and relinquishment of samples of service. Eurofins Xenco will be labe only for the cost of sample of Eurofins Xenco. A minimum charge of SBS.00 will be applied to Figlin cluftshed by: (Signature) Billin cluftshed by: (Signature) 3	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	Sample Identification Matrix	Project Location: 32 (21857 -103). Sampler's Name: A CALCY/WATO PO #: Temp Blank: SAMPLE RECEIPT Temp Blank: Samples Received Intact: Yes No V/A C Sample Custody Seals: Yes No V/A T Total Containers: Yes No V/A T	Project Name: ZUARUIS TAP Project Number: 03D2024059	Project Manager: Haddle Wy Company Name: WS01000 Address: B107 NAF-11 City, State ZIP: UW Sboad, NY Phone: 427-557-58	Curofins Environm
s and shall not assume any responsibility for any losses or to each project and a charge of 55 for each sample submitter Received by: (Signature)	8RCRA 13PPM Texas 11 Al /zed TCLP / SPLP 6010 : 8RCR		Due Date:       TAT starts the day received by the lab, if received by 4:30pm       wet Ice:     XES No       neter ID:     XES No       nn Factor:     D. Z.       dTemperature:     J. J.       Grahv     Grahv	Turn Around	UN     Bill to: (if different)       UC     Company Name:       UC     Address:       UC     City, State ZIP:       S 75     Email:	Houston Midland, T Xenco Hobbs, P
instruce. Signature of this document and relinquishment of samples constitutes a valid purchase or dor from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns and controls of or services. Eurofins Xenco, Will be labele only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such to assume the origination of the spolied to each project and a charge of 55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.  Figlinguished by: (Signature) Received by: (Sig	A 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U		Parameters TPH BTEX 2410ricles BS0-4123 Chain of Custody	ANALYSIS REQUEST	Matri Janalis       Work Order         Matri Janalis       Work Order         Matri Janalis       Program:       UST/PST         State of Project:       Reporting:       Level II         Matri Janalis       Karte of Project:       Level II         Matri Janalis       Karte of Project:       Reporting:         Matri Janalis       Level II       Level III         Matri Janalis       Karte of Project:       A	<b>Chain of Custody</b> Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 885-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199
ed. Received by: (Signature) Date/Time	Ag SiO <sub>2</sub> Na Sr TI Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471	sample Comments	Cool: Cool MeOH: Me HCL: HC HNO 3: HN H320 4: H2 NaOH: Na H3PO 4: HP NaHSO 4: NABIS Na 25 20 3: NASO 3 Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC	Preservative Codes           None: NO         DI Water: H <sub>2</sub> O	Comn Brownfi PST/	Work Order No:

### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 4123 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	

Job Number: 890-4123-1 SDG Number: 03D2024059

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Job Number: 890-4123-1 SDG Number: 03D2024059

List Source: Eurofins Midland

List Creation: 02/21/23 08:18 AM

### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 4123 List Number: 2 Creator: Teel, Brianna

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

Received by OCD: 3/24/2023 1:05:36 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 2/23/2023 3:28:22 PM

# JOB DESCRIPTION

Zia Hills 1AB SDG NUMBER 03D2024059

# **JOB NUMBER**

890-4125-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.

5 6 Received by OCD: 3/24/2023 1:05:36 PM

# **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

RAMER

Generated 2/23/2023 3:28:22 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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	Definitions/Glossary		
Client: Ensolu Project/Site: Z		D: 890-4125-1 : 03D2024059	
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		_
F2	MS/MSD RPD exceeds control limits		5
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA	λ		
Qualifier	Qualifier Description		
*1	LCS/LCSD RPD exceeds control limits.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		8
HPLC/IC			
Qualifier	Qualifier Description		Ç
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		4
CNF	Contains No Free Liquid		1
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		

DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)

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

EPA recommended "Maximum Contaminant Level" MCL

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

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

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

Negative / Absent NEG

POS Positive / Present Practical Quantitation Limit PQL PRES Presumptive

QC Quality Control RER Relative Error Ratio (Radiochemistry)

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

4

#### Job ID: 890-4125-1 SDG: 03D2024059

#### Job ID: 890-4125-1

Project/Site: Zia Hills 1AB

Client: Ensolum

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-4125-1

#### Receipt

The sample was received on 2/17/2023 8:20 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 2.2°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS04 (890-4125-1).

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-46929 and analytical batch 880-46928 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-47003 and analytical batch 880-46994 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

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

#### HPLC/IC

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

Job ID: 890-4125-1 SDG: 03D2024059

## **Client Sample ID: SS04**

Date Collected: 02/15/23 14:50 -Date Re od. 02/17/23 08.20

Project/Site: Zia Hills 1AB

Client: Ensolum

## Lab Sample ID: 890-4125-1

Matrix: Solid

Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)	)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/22/23 09:16	02/23/23 10:46	1
Toluene	0.00375		0.00200	mg/Kg		02/22/23 09:16	02/23/23 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/22/23 09:16	02/23/23 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/22/23 09:16	02/23/23 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/22/23 09:16	02/23/23 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/22/23 09:16	02/23/23 10:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			02/22/23 09:16	02/23/23 10:46	1
1,4-Difluorobenzene (Surr)	109		70 - 130			02/22/23 09:16	02/23/23 10:46	1
Method: TAL SOP Total BTEX - T	otal BTEX Calo	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			02/23/23 12:18	1
Total BTEX [ Method: SW846 8015 NM - Diese				mg/Kg			02/23/23 12:18	1
-	el Range Organ			mg/Kg Unit	D	Prepared	02/23/23 12:18 Analyzed	Dil Fac
_ Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)		<u>D</u>	Prepared		Dil Fac
Method: SW846 8015 NM - Diese Analyte	el Range Organ Result 87.7	ics (DRO) ( Qualifier	GC) 	Unit	<u>D</u>	Prepared	Analyzed	
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ Result 87.7 sel Range Orga Result	ics (DRO) ( Qualifier nnics (DRO) Qualifier	GC) 	Unit	D	Prepared Prepared	Analyzed	
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	el Range Organ 	ics (DRO) ( Qualifier nnics (DRO) Qualifier	GC) <u>RL</u> 50.0 (GC)	Unit mg/Kg			Analyzed 02/23/23 16:21	1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	el Range Organ Result 87.7 sel Range Orga Result	ics (DRO) (( Qualifier mics (DRO) Qualifier U *1	GC)	Unit mg/Kg Unit		Prepared	Analyzed 02/23/23 16:21 Analyzed	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	el Range Organ Result 87.7 sel Range Orga Result <50.0	ics (DRO) (( Qualifier mics (DRO) Qualifier U*1 *1	GC) <u>RL</u> 50.0 (GC) <u>RL</u> 50.0	Unit mg/Kg Unit mg/Kg		Prepared 02/23/23 09:12	Analyzed 02/23/23 16:21 Analyzed 02/23/23 12:48	1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result 87.7 sel Range Orga Result <50.0 87.7	ics (DRO) (( Qualifier mics (DRO) Qualifier U*1 *1	GC) RL 50.0 (GC) RL 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 02/23/23 09:12 02/23/23 09:12	Analyzed 02/23/23 16:21 Analyzed 02/23/23 12:48 02/23/23 12:48	1 Dil Fac 1 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	el Range Organ Result 87.7 sel Range Orga Result <50.0 87.7 <50.0	ics (DRO) (( Qualifier mics (DRO) Qualifier U *1 *1	GC) RL 50.0 (GC) RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 02/23/23 09:12 02/23/23 09:12 02/23/23 09:12	Analyzed 02/23/23 16:21 Analyzed 02/23/23 12:48 02/23/23 12:48	1 <u>Dil Fac</u> 1 1 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	el Range Organ Result 87.7 sel Range Orga Result <50.0 87.7 <50.0	ics (DRO) (( Qualifier mics (DRO) Qualifier U *1 *1	GC) RL 50.0 (GC) RL 50.0 50.0 50.0 Limits	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 02/23/23 09:12 02/23/23 09:12 02/23/23 09:12 02/23/23 09:12 Prepared	Analyzed 02/23/23 16:21 Analyzed 02/23/23 12:48 02/23/23 12:48 02/23/23 12:48	1 Dil Fac 1 1 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	el Range Organ Result 87.7 sel Range Orga Result <50.0 87.7 <50.0 %Recovery 92 97	ics (DRO) (( Qualifier mics (DRO) Qualifier U *1 *1 U Qualifier	GC) RL 50.0 (GC) RL 50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 02/23/23 09:12 02/23/23 09:12 02/23/23 09:12 Prepared 02/23/23 09:12	Analyzed 02/23/23 16:21 Analyzed 02/23/23 12:48 02/23/23 12:48 02/23/23 12:48 Analyzed 02/23/23 12:48	1 Dil Fac 1 1 1 1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	el Range Organ Result 87.7 sel Range Orga Result <50.0 87.7 <50.0 %Recovery 92 97 Chromatograp	ics (DRO) (( Qualifier mics (DRO) Qualifier U *1 *1 U Qualifier	GC) RL 50.0 (GC) RL 50.0 50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 02/23/23 09:12 02/23/23 09:12 02/23/23 09:12 Prepared 02/23/23 09:12	Analyzed 02/23/23 16:21 Analyzed 02/23/23 12:48 02/23/23 12:48 02/23/23 12:48 Analyzed 02/23/23 12:48	1 Dil Fac 1 1 1 1 Dil Fac 1

Eurofins Carlsbad

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

#### Percent Surrogate Recovery (Acceptance Limits) DFBZ1 BFB1 Lab Sample ID **Client Sample ID** (70-130) (70-130) 890-4123-A-1-B MS Matrix Spike 82 85 890-4123-A-1-C MSD Matrix Spike Duplicate 100 108 890-4125-1 SS04 102 109 LCS 880-46929/1-A Lab Control Sample 92 107 LCSD 880-46929/2-A Lab Control Sample Dup 103 110 MB 880-46868/5-A Method Blank 82 104 MB 880-46929/5-A Method Blank 85 99 Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-4123-A-1-F MS	Matrix Spike	107	102		
890-4123-A-1-G MSD	Matrix Spike Duplicate	95	89		
890-4125-1	SS04	92	97		
LCS 880-47003/2-A	Lab Control Sample	107	116		
LCSD 880-47003/3-A	Lab Control Sample Dup	75	85		
MB 880-47003/1-A	Method Blank	110	131 S1+		

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-4125-1

Prep Type: Total/NA

Prep Type: Total/NA

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6
Client: Ensolum

### **QC Sample Results**

Job ID: 890-4125-1 SDG: 03D2024059

Project/Site: Zia Hills 1AB

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

Lab Sample ID: MB 880-46868/ Matrix: Solid	5-A								Clien	it Sar	nple ID: Metho Prep Type: <sup>-</sup>	
Analysis Batch: 46928											Prep Batcl	
		ИВ МЕ	3									
Analyte	Res	ult Qu	alifier	RL		Unit		D	Prepare	d	Analyzed	Dil Fa
Benzene	<0.002	00 U		0.00200		mg/K	g	_	02/21/23 14	4:34	02/22/23 11:49	
Toluene	<0.002	00 U		0.00200		mg/K	g		02/21/23 14	4:34	02/22/23 11:49	
Ethylbenzene	<0.002	00 U		0.00200		mg/K	g		02/21/23 14	4:34	02/22/23 11:49	
m-Xylene & p-Xylene	<0.004	00 U		0.00400		mg/K	g		02/21/23 14	4:34	02/22/23 11:49	
o-Xylene	<0.002	00 U		0.00200		mg/K	g		02/21/23 14	4:34	02/22/23 11:49	
Xylenes, Total	< 0.004	00 U		0.00400		mg/K	g		02/21/23 14	4:34	02/22/23 11:49	
		ИВ МЕ	3									
Surrogate	%Recov	ery Qı	ıalifier	Limits					Prepare	d	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		82		70 - 130				-	02/21/23 1	4:34	02/22/23 11:49	
1,4-Difluorobenzene (Surr)		04		70 - 130					02/21/23 1	4:34	02/22/23 11:49	
Lab Sample ID: MB 880-46929/	5-A								Clien	nt Sar	nple ID: Metho	od Blan
Matrix: Solid											Prep Type:	Total/N
Analysis Batch: 46928			_								Prep Batc	h: <mark>469</mark> 2
Analyte		VIB ME ult Qu		RL		Unit		D	Prepare	d	Analyzed	Dil Fa
Benzene	<0.002			0.00200		mg/K			02/22/23 09		02/23/23 02:51	
Toluene	< 0.002			0.00200		mg/K	-		02/22/23 09		02/23/23 02:51	
Ethylbenzene	<0.002			0.00200		mg/K	-		02/22/23 09		02/23/23 02:51	
n-Xylene & p-Xylene	<0.004			0.00200		mg/K			02/22/23 09		02/23/23 02:51	
p-Xylene	<0.002			0.00400		mg/K	-		02/22/23 0		02/23/23 02:51	
Xylenes, Total	<0.002			0.00200		mg/K	-		02/22/23 0		02/23/23 02:51	
	<0.00-	00 0		0.00400		iiig/it	9		02/22/23 03	9.10	02/23/23 02.31	
		MB ME							_			
Surrogate	%Recov		alifier	Limits				-	Prepare		Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		85		70 - 130					02/22/23 0		02/23/23 02:51	
1,4-Difluorobenzene (Surr)		99		70 - 130					02/22/23 0	9:16	02/23/23 02:51	
Lab Sample ID: LCS 880-46929	/ <b>1-A</b>							CI	ient Sam	ple IC	D: Lab Control	Samp
Matrix: Solid											Prep Type:	Total/N
Analysis Batch: 46928											Prep Batc	h: <mark>469</mark> 2
				Spike	LCS	LCS					%Rec	
Analyte				Added	Result	Qualifier	Unit		D %Re	c	Limits	
Benzene				0.100	0.1023		mg/Kg		10	2	70 - 130	
Toluene				0.100	0.1011		mg/Kg		10	1	70 - 130	
Ethylbenzene				0.100	0.09373		mg/Kg		9	4	70 - 130	
m-Xylene & p-Xylene				0.200	0.1915		mg/Kg		9	6	70 - 130	
o-Xylene				0.100	0.09836		mg/Kg		9	8	70 - 130	
	LCS	.cs										
Surrogate	%Recovery	Qualifie	r	Limits								
4-Bromofluorobenzene (Surr)	92			70 - 130								
1,4-Difluorobenzene (Surr)	107			70 - 130								
Lab Sample ID: LCSD 880-4692	9/2-A						Clie	nt s	Sample II	D: La	b Control Sam	ple Du
Matrix: Solid											Prep Type:	Total/N
Analysis Batch: 46928											Prep Batcl	
-				Spike	LCSD	LCSD					%Rec	RP
Analuta				Added	Result	Qualifier	Unit		D %Re	c	Limits RPI	D Lim
Analyte				Adduda	Rooun	quannoi			D /0100			

Job ID: 890-4125-1 SDG: 03D2024059

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

Lab Sample ID: LCSD 880-4	6929/2-A					Clie	nt Sam	ple ID: I	Lab Contro		
Matrix: Solid									Prep 1	ype: To	tal/NA
Analysis Batch: 46928									Prep	Batch:	46929
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.1089		mg/Kg		109	70 - 130	7	35
Ethylbenzene			0.100	0.1027		mg/Kg		103	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2128		mg/Kg		106	70 - 130	11	35
o-Xylene			0.100	0.1094		mg/Kg		109	70 - 130	11	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	103		70 - 130								
1,4-Difluorobenzene (Surr)	110		70 _ 130								
- Lab Sample ID: 890-4123-A	-1-B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep 1	ype: To	tal/NA
Analysis Batch: 46928									Prep	Batch:	46929
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		

Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U F1 F2	0.101	0.04951	F1	mg/Kg		49	70 - 130	
Toluene	0.00490	F1	0.101	0.07116	F1	mg/Kg		66	70 - 130	
Ethylbenzene	0.00362		0.101	0.07403		mg/Kg		70	70 - 130	
m-Xylene & p-Xylene	0.00658	F1	0.202	0.1234	F1	mg/Kg		58	70 - 130	
o-Xylene	0.00316	F1	0.101	0.06386	F1	mg/Kg		60	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	82		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

#### Lab Sample ID: 890-4123-A-1-C MSD Matrix: Solid Analysis Batch: 46928

1,4-Difluorobenzene (Surr)

Analysis Batch: 46928									Prep	Batch:	46929
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U F1 F2	0.0992	0.09288	F2	mg/Kg		93	70 - 130	61	35
Toluene	0.00490	F1	0.0992	0.09288		mg/Kg		89	70 - 130	26	35
Ethylbenzene	0.00362		0.0992	0.08391		mg/Kg		81	70 - 130	13	35
m-Xylene & p-Xylene	0.00658	F1	0.198	0.1714		mg/Kg		83	70 - 130	33	35
o-Xylene	0.00316	F1	0.0992	0.08869		mg/Kg		86	70 - 130	33	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	100		70 - 130								

70 - 130

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

108

Lab Sample ID: MB 880-47003/1-A Matrix: Solid Analysis Batch: 46994	MB	МВ				Client Sa	mple ID: Metho Prep Type: <sup>-</sup> Prep Batcl	Fotal/NA
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/23/23 09:12	02/23/23 08:36	1

Eurofins Carlsbad

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Client: Ensolum

Project/Site: Zia Hills 1AB

### **QC Sample Results**

### Job ID: 890-4125-1 SDG: 03D2024059

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

Lab Sample ID: MB 880-47003/ Matrix: Solid								Cile	an 3d	mple ID:		
											ype: To	
Analysis Batch: 46994		МВ МВ								Frep	Batch:	47003
Analyte		sult Qualifi	er F	RL	Unit		D	Prepar	ed	Analyz	ed	Dil Fac
Diesel Range Organics (Over			50					)2/23/23 (		02/23/23		
C10-C28)		0.0 0			iiig/i	.9		52/20/20	00.12	02/20/20	00.00	
Oll Range Organics (Over C28-C36)	<5	0.0 U	50	0.0	mg/ł	٢g	(	)2/23/23 (	09:12	02/23/23	08:36	
		MB MB						-				
Surrogate 1-Chlorooctane	%Recov	<b>ery</b> Qualifi 110	ier <u>Limits</u> 70 - 130	<u> </u>			_	<b>Prepar</b> 02/23/23		Analyz 02/23/23		Dil Fa
o-Terphenyl		131 S1+	70 - 130 70 - 130					02/23/23 (		02/23/23		
o-reiphenyi		131 31+	70 - 750	•			,	52/23/23	09.12	02/23/23	00.30	
Lab Sample ID: LCS 880-47003	3/2-A						Cli	ent San	nple l	D: Lab Co	ontrol S	ample
Matrix: Solid											Type: To	
Analysis Batch: 46994											Batch:	
			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D %R	lec	Limits		
Gasoline Range Organics			1000	1174		mg/Kg			17	70 - 130		
(GRO)-C6-C10						5 5						
Diesel Range Organics (Over			1000	1103		mg/Kg		1	10	70 - 130		
C10-C28)												
	LCS I	LCS										
Surrogate	%Recovery	Qualifier	Limits									
-	%Recovery 107	Qualifier	_ <u>Limits</u> 70 _ 130									
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-470	107 116	Qualifier				Cli	ient S	ample	ID: La	ab Contro Prep 1		
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-470 Matrix: Solid	107 116	Qualifier	70 - 130 70 - 130			Cli	ient S	ample	ID: La	Prep T Prep	l Samp Type: To Batch:	otal/N/ 4700
Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994	107 116	Qualifier	70 - 130 70 - 130 <b>Spike</b>		LCSD		ient S	-		Prep T Prep %Rec	Type: To Batch:	otal/NA 47003 RPI
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-470 Matrix: Solid Analysis Batch: 46994 Analyte	107 116	Qualifier	70 - 130 70 - 130 Spike Added	Result	Qualifier	Unit	ient S	D_%R	lec	Prep 1 Prep %Rec Limits	Batch:	otal/N/ 47003 RPI Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics	107 116	Qualifier	70 - 130 70 - 130 <b>Spike</b>		Qualifier		ient S	D_%R		Prep T Prep %Rec	Type: To Batch:	otal/NA 47003 RPI Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte	107 116	Qualifier	70 - 130 70 - 130 Spike Added	Result	Qualifier *1	Unit	ient S	<u>D %R</u>	lec	Prep 1 Prep %Rec Limits	Batch:	<b>47003</b> <b>RPE</b> Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10	107 116	Qualifier	70 - 130 70 - 130 <b>Spike</b> Added	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	<b>lec</b> 91	Prep 1 Prep %Rec Limits 70 - 130	RPD       26	<b>47003</b> <b>RPE</b> Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116 03/3-A		70 - 130 70 - 130 <b>Spike</b> Added	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	<b>lec</b> 91	Prep 1 Prep %Rec Limits 70 - 130	RPD       26	<b>47003</b> <b>RPE</b> Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	107 116 03/3-A	LCSD	70 - 130 70 - 130 <b>Spike</b> Added 1000	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	<b>lec</b> 91	Prep 1 Prep %Rec Limits 70 - 130	RPD       26	<b>47003</b> <b>RPI</b> Limi
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	107 116 03/3-A 	LCSD	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	<b>lec</b> 91	Prep 1 Prep %Rec Limits 70 - 130	RPD       26	<b>47003</b> <b>RPI</b> Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	107 116 03/3-A 	LCSD	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	<b>lec</b> 91	Prep 1 Prep %Rec Limits 70 - 130	RPD       26	<b>47003</b> <b>RPI</b> Limi
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	107 116 03/3-A 	LCSD	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	<b>lec</b> 91	Prep 1 Prep %Rec Limits 70 - 130	RPD       26	<b>47003</b> <b>RPE</b> Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	107 116 03/3-A 	LCSD	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	800	Prep 1 Prep %Rec Limits 70 - 130	Type: To Batch: RPD 26 31	0tal/N/ 47003 RPI Limi 20 20
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/	107 116 03/3-A 	LCSD	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	800	Prep 7 Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch: RPD 26 31	47003 47003 RPI Limi 20 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-A-1-F	107 116 03/3-A 	LCSD	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000	<b>Result</b> 908.0	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	800	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch:	47003 47003 RPI Limi 20 20 20
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-4123-A-1-F Matrix: Solid	107 116 03/3-A 	LCSD Qualifier	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000	<b>Result</b> 908.0 806.6	Qualifier *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	800	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch: 26 31 : Matrix Type: To	47003 RPI Limi 20 20 Spike
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-4123-A-1-F Matrix: Solid	107 116 03/3-A <i>LCSD</i> %Recovery 75 85 = MS	LCSD Qualifier Sample	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000 1000 70 - 130 70 - 130	Result 908.0 806.6 MS	Qualifier *1 *1	_ <mark>Unit</mark> mg/Kg	ient S	<u>D %R</u>	ec 91 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	Type: To Batch: 26 31 : Matrix Type: To	47003 47003 RPI Limi 20 20 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-A-1-F Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics	107 116 03/3-A <i>LCSD 1</i> %Recovery 0 75 85 F MS Sample 5	LCSD Qualifier Sample Qualifier_	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000 1000 70 - 130 70 - 130 70 - 130	Result 908.0 806.6 MS	Qualifier *1 *1 MS	_ <mark>Unit</mark> mg/Kg mg/Kg	ient S	D %R	ec 91 81	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 - 190	Type: To Batch: 26 31 : Matrix Type: To	4700 RPI Lim 2 2 3 Spike
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-4123-A-1-F Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10	107 116 03/3-A <i>LCSD 1</i> % <i>Recovery 0</i> 75 85 F MS Sample 3 <u>Result 0</u> <49.9 1	LCSD Qualifier Sample Qualifier J *1	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         1000         1000         1000         1000         500         1000	Result           908.0           806.6           MS           Result           1211	Qualifier *1 *1 MS	Unit mg/Kg mg/Kg	ient S	D %R Cli D %R 1	ec 91 81 ient S cec 19	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 8 6 6 70 - 130 7 7 7 7 0 - 130	Type: To Batch: 26 31 : Matrix Type: To	ATOUS ATOUS RPI Limi 20 20 20 3 5 5 5 5 10 10 10 10 10 10 10 10 10 10 10 10 10
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-A-1-F Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116 03/3-A <i>LCSD 1</i> % <i>Recovery 0</i> 75 85 F MS Sample 3 <u>Result 0</u>	LCSD Qualifier Sample Qualifier J *1	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000 1000 1000 1000 50 - 130 70 - 130 70 - 130 70 - 130	Result           908.0           806.6           MS           Result	Qualifier *1 *1 MS	_ Unit mg/Kg mg/Kg	ient S	D %R Cli D %R 1	ecc	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 - 1	Type: To Batch: 26 31 : Matrix Type: To	4700 RPI Lim 2 2 3 Spike
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-4123-A-1-F Matrix: Solid Analyte Gasoline Range Organics	107 116 03/3-A <i>LCSD 1</i> % <i>Recovery 0</i> 75 85 F MS Sample 3 <u>Result 0</u> <49.9 1	LCSD Qualifier Sample Qualifier J *1	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         1000         1000         1000         1000         500         1000	Result           908.0           806.6           MS           Result           1211	Qualifier *1 *1 MS	Unit mg/Kg mg/Kg	ient S	D %R Cli D %R 1	ec 91 81 ient S cec 19	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 8 6 6 70 - 130 7 7 7 7 0 - 130	Type: To Batch: 26 31 : Matrix Type: To	ATOUS ATOUS RPI Limi 20 20 20 3 5 5 5 5 10 10 10 10 10 10 10 10 10 10 10 10 10
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-4123-A-1-F Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116 03/3-A <i>LCSD 4</i> %Recovery 6 75 85 F MS Sample 8 Result 6 <49.9 0 76.8	LCSD Qualifier Qualifier U *1	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         1000         1000         1000         1000         500         1000	Result           908.0           806.6           MS           Result           1211	Qualifier *1 *1 MS	Unit mg/Kg mg/Kg	ient S	D %R Cli D %R 1	ec 91 81 ient S cec 19	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 8 6 6 70 - 130 7 7 7 7 0 - 130	Type: To Batch: 26 31 : Matrix Type: To	47003 RPI Limi 20 20 Spike
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-4700 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-4123-A-1-F Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	107 116 03/3-A <i>LCSD 1</i> %Recovery 0 75 85 FMS Sample 2 Result 0 <49.9 0 76.8	LCSD Qualifier Qualifier U *1	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         1000         1000         1000         1000         500         1000	Result           908.0           806.6           MS           Result           1211	Qualifier *1 *1 MS	Unit mg/Kg mg/Kg	ient S	D %R Cli D %R 1	ec 91 81 ient S cec 19	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 8 6 6 70 - 130 7 7 7 7 0 - 130	Type: To Batch: 26 31 : Matrix Type: To	47003 RPE Limi 20 20 Spike

Client: Ensolum

Project/Site: Zia Hills 1AB

### **QC Sample Results**

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

Matrix: Solid	G MSD					C	ment Sa	ample II	): Matrix Sp Bron 1	oike Dup Type: Tot	
Analysis Batch: 46994	0	0	0	MOD	MOD					Batch:	
	Sample		Spike		MSD		_		%Rec		RPI
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Gasoline Range Organics	<49.9	U *1	998	986.4		mg/Kg		97	70 - 130	20	2
(GRO)-C6-C10 Diesel Range Organics (Over	76.8	*1	998	993.4		mg/Kg		92	70 - 130	12	2
C10-C28)	70.0	I	330	330.4		ing/itg		52	70 - 100	12	2
010 020)											
	MSD										
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	95		70 - 130								
o-Terphenyl	89		70 - 130								
lethod: 300.0 - Anions, lo Lab Sample ID: MB 880-46847 Matrix: Solid Analysis Batch: 46985		ograpny						Client S	Sample ID: Prep	Method Type: So	
		MB MB									
Analyte	R	esult Qualifier		RL	Unit		D P	repared	Analyz	ed	Dil Fa
Chloride		5.00 U		5.00	mg/Kg			opulou	02/23/23		2
Matrix: Solid	11 <b>2-</b> A							Campi		Type: So	
Matrix: Solid Analysis Batch: 46985 <sup>Analyte</sup>			Spike Added	Result	LCS Qualifier	Unit	<u>D</u>	%Rec	Prep %Rec Limits		
Matrix: Solid Analysis Batch: 46985 <sup>Analyte</sup>						Unit mg/Kg		-	Prep %Rec		
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880-468 Matrix: Solid			Added	Result		mg/Kg	<u>D</u>	<b>%Rec</b> 98	Prep %Rec Limits 90 - 110	Type: So	olub e Du
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880-468 Matrix: Solid			Added 250	Result 245.9	Qualifier	mg/Kg	<u>D</u>	<b>%Rec</b> 98	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: So	e Du olub
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880-468 Matrix: Solid Analysis Batch: 46985			Added 250 Spike	Result 245.9 LCSD	Qualifier	mg/Kg Clie	D_	%Rec 98	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: So J Sample Type: So	e Du olub RF
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880-468 Matrix: Solid Analysis Batch: 46985 Analyte			Added 250 Spike Added	Result 245.9 LCSD Result	Qualifier	mg/Kg Clie	<u>D</u>	%Rec 98 aple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits	Type: So ol Sample Type: So 	e Du olub RF Lin
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Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880-468 Matrix: Solid Analysis Batch: 46985 Analyte Chloride	947/3-A		Added 250 Spike Added	Result 245.9 LCSD Result	Qualifier	mg/Kg Clie	D_	%Rec 98 aple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110	Type: So of Sample Type: So <u>RPD</u> 3	e Du olub RF Lin
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Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880-468 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125-1 MS Matrix: Solid	947/3-A		Added 250 Spike Added	Result 245.9 LCSD Result	Qualifier	mg/Kg Clie	D_	%Rec 98 aple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sau	Type: So of Sample Type: So <u>RPD</u> 3	e Du olub RF Lim SS0
Lab Sample ID: LCS 880-4684 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880-468 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125-1 MS Matrix: Solid Analysis Batch: 46985	947/3-A		Added 250 Spike Added	Result 245.9 LCSD Result 254.3	Qualifier	mg/Kg Clie	D_	%Rec 98 aple ID: %Rec	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 Client Sau	Type: So of Sample Type: So <u>RPD</u> 3 mple ID:	e Du olubi RP Lim 2 SS0
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### **QC Association Summary**

Client: Ensolum Project/Site: Zia Hills 1AB

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Job ID: 890-4125-1 SDG: 03D2024059

### **GC VOA**

#### Prep Batch: 46868

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AB 880-46868/5-A	Method Blank	Total/NA	Solid	5035	
nalysis Batch: 46928					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4125-1	SS04	Total/NA	Solid	8021B	46929
MB 880-46868/5-A	Method Blank	Total/NA	Solid	8021B	46868
MB 880-46929/5-A	Method Blank	Total/NA	Solid	8021B	46929
LCS 880-46929/1-A	Lab Control Sample	Total/NA	Solid	8021B	46929
LCSD 880-46929/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46929
890-4123-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	46929
890-4123-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46929
rep Batch: 46929 Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4125-1	SS04	Total/NA	Solid	5035	·
MB 880-46929/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46929/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46929/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4123-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-4123-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
- Analysis Batch: 47048					
- Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
		Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 46994

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4125-1	SS04	Total/NA	Solid	8015B NM	47003
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015B NM	47003
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47003
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47003
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	47003
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47003

Prep Batch: 47003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4125-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4125-1	SS04	Total/NA	Solid	8015 NM	

### **QC** Association Summary

Client: Ensolum Project/Site: Zia Hills 1AB

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Job ID: 890-4125-1 SDG: 03D2024059

#### HPLC/IC

### Leach Batch: 46847

ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
390-4125-1	SS04	Soluble	Solid	DI Leach	
MB 880-46847/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-46847/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
.CSD 880-46847/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4125-1 MS	SS04	Soluble	Solid	DI Leach	
390-4125-1 MSD	SS04	Soluble	Solid	DI Leach	
nalysis Batch: 4698	5				
ab Sample ID.	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
90-4125-1	SS04	Soluble	Solid	300.0	46847
/IB 880-46847/1-A	Method Blank	Soluble	Solid	300.0	46847
CS 880-46847/2-A	Lab Control Sample	Soluble	Solid	300.0	46847
	Lab Control Sample Dup	Soluble	Solid	300.0	46847
CSD 880-46847/3-A	Lab Control Gample Dup				
-CSD 880-46847/3-A 390-4125-1 MS	SS04	Soluble	Solid	300.0	46847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-4125-1	SS04	Soluble	Solid	300.0	46847	
MB 880-46847/1-A	Method Blank	Soluble	Solid	300.0	46847	
LCS 880-46847/2-A	Lab Control Sample	Soluble	Solid	300.0	46847	
LCSD 880-46847/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46847	
890-4125-1 MS	SS04	Soluble	Solid	300.0	46847	
890-4125-1 MSD	SS04	Soluble	Solid	300.0	46847	

Job ID: 890-4125-1 SDG: 03D2024059

Matrix: Solid

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Lab Sample ID: 890-4125-1

### Client Sample ID: SS04 Date Collected: 02/15/23 14:50

Project/Site: Zia Hills 1AB

Client: Ensolum

Date Received: 02/17/23 08:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	46929	02/22/23 09:16	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46928	02/23/23 10:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47048	02/23/23 12:18	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47106	02/23/23 16:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 12:48	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	46847	02/21/23 13:15	KS	EET MID
Soluble	Analysis	300.0		1			46985	02/23/23 02:15	СН	EET MID

#### Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 4/27/2023 10:16:44 AM

Accreditation/Certification Summary

Client: Ensolum Project/Site: Zia Hills 1AB

Laboratory: Eurofins Midland

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

thority		rogram	Identification Number	Expiration Date
as	N	ELAP T104704400-22-25		06-30-23
• ,		ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for w
the agency does not o	ffer certification.			
the agency does not o Analysis Method	ffer certification . Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

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Job ID: 890-4125-1 SDG: 03D2024059

### **Method Summary**

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4125-1 SDG: 03D2024059

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe	rences:		
ASTM = A	STM International		
EPA = US	Environmental Protection Agency		
SW846 = '	'Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edit	on, November 1986 And Its Updates.	
TAL SOP :	<ul> <li>TestAmerica Laboratories, Standard Operating Procedure</li> </ul>		
Laboratory R			
EET MID :	Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

#### Laboratory References:

Eurofins Carlsbad

Released to Imaging: 4/27/2023 10:16:44 AM

### **Sample Summary**

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4125-1 SDG: 03D2024059

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-4125-1	SS04	Solid	02/15/23 14:50	02/17/23 08:20	0.5'	4
						5
						8
						9
						12
						13

Induct Manage:     MaxIL     Max underson     Max un	IIIC HIVE     Turn       AHIIS HAR IN IC     Email:       AHIIS HAR IN     Email:       Temperature Reading:     Frees       Ves No MA     Temperature Reading:       Ves No MA     Corrected Temperature:       Amatrix Sampled     Sampled       Sampled     Sampled       Sampled     Sampled       Sampled     Sampled       Sampled     TCLP / SP       reinquishment of samples constitutes a valid purchase order only for the cost of samples and shall not assume any response order only for the cost of samples and shall not assume any response of store of	Hobbs. NM(575) 392-7550. Carkbad, NM (575) 988-3199       Bill to:     If different)     Mall (1)     Mall (1)       Company Name:     Andress:     Andress:     Andress:       City, State ZIP:     On UKSC/UT/COM/WAR/MILLOGAL     Andress:     Andress:       Turn Around     Free     On UKSC/UT/COM/WAR/MILLOGAL     Andress:       Tar starts the day received by     Free     Andress:     Andress:       Tar starts the day received by     Free     Andress:     Andress:       Tar starts the day received by     Free     Andress:     Andress:       Transition:     Turn Around     Free     Andress:       Transition:     Turn Around     Andress:     Andress:       Tar starts the day received by     Free     Andress:     Andress:       Transition:     Turn Around     Free     Andress:       Transition:     Turn Around     Free     Andress:       Tar starts the day received by     Free     Start     Start       Transition:     Turn Around     Free     Start       Transition:     Graphic Carrier     Free     Start       Transition:     Graphic Carrier     Free     Start       Transition:     Graphic Carrier     Free     Start       Start     Start     S	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	AVALUAL AVALUAL AVALUAL ANALYSIS REQUEST ANALYSIS Chain of Custody 890-4125 Chain of Custody Contractors. It assigns standard terms and conditions tosses are due to clicitumentations beyond the conditions tosses are due to clicitumentations to contractors. It assigns standard terms and conditions tosses are due to clicitumentations to contractors. It assigns standard terms and conditions tosses are due to clicitumentations to contractors. It assigns standard terms and conditions tosses are due to clicitumentations to contractors. It assigns standard terms and conditions tosses are due to clicitumentations to contractors. It assigns standard terms and conditions tosses are due to clicitumentations to contractors. It assigns standard terms and conditions tosses are due to clicitumentations to contractors. The assigns standard terms and conditions tosses are due to clicitumentations. The assigns standard terms and conditions tosses are due to clicitumentations. The assigns standard terms and conditions tosses are due to clicitumentations. The assigns standard terms and conditions tosses are due to clicitumentations. The assigns standard terms and conditions.	www.xenco.com       Page.         Program:       UST/PST       PRP       Brownfields         State of Project:       Reporting:       Level III       PST/UST         Reporting:       Level III       PST/UST       Pres         CUEST       Fold       Abapt       Pres         Of Custody       Sam       Sam       None: NO         Ng Mn Mo Ni K Se Ag SIO2 Na Sr TI Sn U       Hg: 1631 / 245.1 / 7470 / 3       NaOH+As         I terms and conditions       se period the conditions       Sam         I terms and conditions       Received by: (Signature)       Received by: (Signature)	www.xenco.com       Page       of         Work Order Comments       state of Project:       superfund       superfund         Reporting:       Level III       PST/UST       TRRP       level IV       other:         Image: Transport of the state of Project:       ADaPT       other:       other:       other:         Image: Transport of the state of Project:       ADaPT       other:       other:       other:         Image: Transport of the state of Project:       None: NO       DI Water: H,O       cool: Cool       MeOH: Me         Image: Transport of the state of the
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		Hobbs, NM (5	575) 392-7550. Carlsbad, NM	(575) 988-3199		1 1
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	Date Time	Grab/	PITEN			
Sample Identification	Sampled	Comp	547			sample comments
	2-15-73	1 2 S	111			SIL COPILL JUNI
	8RCRA	Texas 11	As Ba Be B Cd	Cr Co Cu Fe Pb	Mo Ni K Se Aq SiO, Na	TI Sn U V
Circle Method(s) and Metal(s) to		SPLP 6010 : 8RCRA S	sb As Ba Be Cd Cr (	Co Cu Pb Mn Mo Ni Se Ag	TI U Hg: 1631 / 245	1 / 7470 / 7471
Notice: Signature of this document and relinquishm of service. Eurofins Xenco will be liable only for the	ment of samples constitutes a valid purchase c e cost of samples and shall not assume any res	rder from client company to Euro ponsibility for any losses or expen-	fins Xenco, its affiliates and subc ses incurred by the client if such	ontractors. It assigns standard terms and co losses are due to circumstances beyond the	control	
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Chain of Custody

### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 4125 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	

#### Job Number: 890-4125-1 SDG Number: 03D2024059

List Source: Eurofins Carlsbad

Eurofins Carlsbad Released to Imaging: 4/27/2023 10:16:44 AM

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### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

Login Number: 4125 List Number: 2 Creator: Teel, Brianna

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

-

Job Number: 890-4125-1 SDG Number: 03D2024059

List Source: Eurofins Midland List Creation: 02/21/23 08:18 AM

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Eurofins Carlsbad Released to Imaging: 4/27/2023 10:16:44 AM Received by OCD: 3/24/2023 1:05:36 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Hadlie Green Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 3/8/2023 1:14:26 PM Revision 1

## JOB DESCRIPTION

Zia Hills 1AB SDG NUMBER 03D2024059

## **JOB NUMBER**

890-4126-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



Received by OCD: 3/24/2023 1:05:36 PM

1

## **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

RAMER

Generated 3/8/2023 1:14:26 PM Revision 1

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

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

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**Client: Ensolum** Project/Site: Zia Hills 1AB

EDL

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	5
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VO	Α	
Qualifier	Qualifier Description	
*1	LCS/LCSD RPD exceeds control limits.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	8
HPLC/IC		
Qualifier	Qualifier Description	9
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	12
CNF	Contains No Free Liquid	13
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)	

Limit of Detection (DoD/DOE) LOD LOQ Limit of Quantitation (DoD/DOE) MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry) MDL Method Detection Limit Minimum Level (Dioxin) ML MPN Most Probable Number MQL Method Quantitation Limit NC Not Calculated Not Detected at the reporting limit (or MDL or EDL if shown) ND Negative / Absent NEG POS Positive / Present Practical Quantitation Limit PQL PRES Presumptive QC **Quality Control** RER Relative Error Ratio (Radiochemistry) Reporting Limit or Requested Limit (Radiochemistry) RL RPD Relative Percent Difference, a measure of the relative difference between two points TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) TEQ

Estimated Detection Limit (Dioxin)

TNTC Too Numerous To Count Page 53 of 80

Job ID: 890-4126-1

SDG: 03D2024059

### **Case Narrative**

Client: Ensolum Project/Site: Zia Hills 1AB

### Job ID: 890-4126-1

#### Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-4126-1

#### REVISION

The report being provided is a revision of the original report sent on 2/23/2023. The report (revision 1) is being revised due to Per client email, requesting sample name edit.

Report revision history

#### Receipt

The sample was received on 2/17/2023 8:20 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 2.2°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS06 (890-4126-1).

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-46929 and analytical batch 880-46928 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-47003 and analytical batch 880-46994 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

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

#### HPLC/IC

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

#### Job ID: 890-4126-1 SDG: 03D2024059

### **Client Sample Results**

RL

0.00202

0.00202

Unit

mg/Kg

mg/Kg

Result Qualifier

<0.00202 U

0.00701

Client: Ensolum Project/Site: Zia Hills 1AB

Analyte

Benzene

Toluene

#### **Client Sample ID: SS06** Г Г

Job ID: 890-4126-1 SDG: 03D2024059

### Lab Sample ID: 890-4126-1

Analyzed

Prepared

02/22/23 09:16 02/23/23 11:07

02/22/23 09:16 02/23/23 11:07

D

Matrix: Solic

24059	2
126-1 Solid	3
	4
Dil Fac	5
1 1	6
1	7
1	8
Dil Fac	9
1 1	10
Dil Fac	11
1	12
Dil Fac	13
1	14

Date Collected: 02/15/23 14:35
Date Received: 02/17/23 08:20
Sample Depth: 0.5'
_ Method: SW846 8021B - Volatile Organic Compounds (GC)

Xylenes, Total         <0.00403	Prepared	Analyzed	Dil Fac
Xylenes, Total<0.00403			
Xylenes, Total<0.00403U0.00403mg/Kg0Surrogate%RecoveryQualifierLimits4-Bromofiluorobenzene (Surr)10470 - 13001,4-Difluorobenzene (Surr)10970 - 1300Method: TAL SOP Total BTEX - Total BTEX CalculationAnalyteResult QualifierRLUnitDTotal BTEX0.01190.00403mg/Kg0Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)AnalyteResult QualifierRLUnitDTotal TPH93.949.8mg/Kg0Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResult QualifierRLUnitDGasoline Range Organics<49.8			
Xylenes, Total       <0.00403	02/23/23 09:12	02/23/23 13:10	1
Xylenes, Total       <0.00403		02/23/23 13:10	1
Xylenes, Total       <0.00403	Prepared	Analyzed	Dil Fac
Xylenes, Total       <0.00403	02/23/23 09:12	02/23/23 13:10	1
Xylenes, Total<0.00403U0.00403mg/Kg0Surrogate%RecoveryQualifierLimits4-Bromofluorobenzene (Surr)10470 - 13001,4-Difluorobenzene (Surr)10970 - 1300Method: TAL SOP Total BTEX - Total BTEX CalculationAnalyteResultQualifierRLUnitDTotal BTEX0.01190.00403mg/KgMethod: SW846 8015 NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierTotal TPH93.949.8mg/KgMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierResultQualifierRLUnitUnitDmg/KgMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierResultQualifierRLUnitMethod: SW846 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierGasoline Range Organics<49.8	02/23/23 09:12	02/23/23 13:10	1
Xylenes, Total       <0.00403	02/23/23 09:12	02/23/23 13:10	1
Xylenes, Total       <0.00403	Prepared	Analyzed	Dil Fac
Xylenes, Total       <0.00403       U       0.00403       mg/Kg       0         Surrogate       %Recovery       Qualifier       Limits       0       0         4-Bromofiluorobenzene (Surr)       104       70 - 130       0       0         1,4-Difluorobenzene (Surr)       109       70 - 130       0       0         Method: TAL SOP Total BTEX - Total BTEX Calculation       Analyte       Result       Qualifier       RL       Unit       D         Total BTEX       0.0119       0.00403       mg/Kg       0         Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)       Analyte       Result       Qualifier       RL       Unit       D			
Xylenes, Total       <0.00403		02/23/23 16:21	1
Xylenes, Total       <0.00403       U       0.00403       mg/Kg       0         Surrogate       %Recovery       Qualifier       Limits         4-Bromofluorobenzene (Surr)       104       70 - 130       0         1,4-Difluorobenzene (Surr)       109       70 - 130       0         Method: TAL SOP Total BTEX - Total BTEX Calculation       Result       Qualifier       RL       Unit       D	Prepared	Analyzed	Dil Fac
Xylenes, Total<0.00403U0.00403mg/Kg0Surrogate%RecoveryQualifierLimits4-Bromofluorobenzene (Surr)10470 - 13001,4-Difluorobenzene (Surr)10970 - 1300Method: TAL SOP Total BTEX - Total BTEX Calculation		02/23/23 12:18	1
Xylenes, Total         <0.00403         U         0.00403         mg/Kg         0           Surrogate         %Recovery         Qualifier         Limits         0	Prepared	Analyzed	Dil Fac
Xylenes, Total         <0.00403         U         0.00403         mg/Kg         0           Surrogate         %Recovery         Qualifier         Limits         0			
Xylenes, Total         <0.00403         U         0.00403         mg/Kg         0           Surrogate         %Recovery         Qualifier         Limits         Limits <thlimits< th="">         Limits         Lim</thlimits<>	02/22/23 09:16	02/23/23 11:07	1
Xylenes, Total <0.00403 U 0.00403 mg/Kg 0	02/22/23 09:16	02/23/23 11:07	1
	Prepared	Analyzed	Dil Fac
	02/22/23 09:16	02/23/23 11:07	1
		02/23/23 11:07	1
m-Xylene & p-Xylene <0.00403 U 0.00403 mg/Kg 0	02/22/23 09:16	02/23/23 11:07	1
Ethylbenzene 0.00279 0.00202 mg/Kg 0	02/22/23 09:16	02/23/23 11:07	1

### **Surrogate Summary**

Client: Ensolum Project/Site: Zia Hills 1AB

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

			Percent Surrogate Recovery (A	cceptance Limits)
		BFB1	FBZ1	
Lab Sample ID	Client Sample ID	(70-130)	0-130)	
390-4123-A-1-B MS	Matrix Spike	82	85	
390-4123-A-1-C MSD	Matrix Spike Duplicate	100	108	
390-4126-1	SS06	104	109	
_CS 880-46929/1-A	Lab Control Sample	92	107	
_CSD 880-46929/2-A	Lab Control Sample Dup	103	110	
MB 880-46868/5-A	Method Blank	82	104	
MB 880-46929/5-A	Method Blank	85	99	

#### Surrogate Legend

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

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

Percent Surrogate Recovery (Acceptance Limits) 1CO1 OTPH1 **Client Sample ID** (70-130) (70-130) Lab Sample ID 890-4123-A-1-F MS Matrix Spike 107 102 890-4123-A-1-G MSD Matrix Spike Duplicate 89 95 SS06 890-4126-1 96 103 LCS 880-47003/2-A Lab Control Sample 107 116 LCSD 880-47003/3-A Lab Control Sample Dup 75 85 MB 880-47003/1-A Method Blank 110 131 S1+

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Job ID: 890-4126-1 SDG: 03D2024059

Prep Type: Total/NA

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Client: Ensolum Project/Site: Zia Hills 1AB

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

Lab Sample ID: MB 880-4 Matrix: Solid							•		ole ID: Methoo Prep Type: T	
Analysis Batch: 46928									Prep Batch	
-	MB	MB								
Analyte	Result	Qualifier	RL	-	Unit	[	) F	Prepared	Analyzed	Dil F
Benzene	<0.00200	U	0.00200	)	mg/K	g	02/2	21/23 14:34	02/22/23 11:49	
Toluene	<0.00200	U	0.00200	)	mg/K	g	02/2	21/23 14:34	02/22/23 11:49	
Ethylbenzene	<0.00200	U	0.00200	)	mg/K	g	02/2	21/23 14:34	02/22/23 11:49	
m-Xylene & p-Xylene	<0.00400	U	0.00400	)	mg/K	g	02/2	21/23 14:34	02/22/23 11:49	
o-Xylene	<0.00200	U	0.00200	)	mg/K	g	02/2	21/23 14:34	02/22/23 11:49	
Xylenes, Total	<0.00400	U	0.00400	)	mg/K	g	02/2	21/23 14:34	02/22/23 11:49	
	МВ	МВ								
Surrogate	%Recovery	Qualifier	Limits				F	Prepared	Analyzed	Dil F
4-Bromofluorobenzene (Surr)	82		70 - 130	-			02/	21/23 14:34	02/22/23 11:49	
1,4-Difluorobenzene (Surr)	104		70 - 130				02/	21/23 14:34	02/22/23 11:49	
Lab Sample ID: MB 880-4	46929/5-A						Cli	ent Samp	ole ID: Method	d Blai
Matrix: Solid									Prep Type: T	otal/N
Analysis Batch: 46928									Prep Batch	: 469
-	MB	MB								
Analyte	Result	Qualifier	RL	-	Unit	0	) F	Prepared	Analyzed	Dil F
Benzene	<0.00200	U	0.00200	)	mg/K	g	02/2	22/23 09:16	02/23/23 02:51	
Toluene	<0.00200	U	0.00200	)	mg/K	g	02/2	22/23 09:16	02/23/23 02:51	
Ethylbenzene	<0.00200	U	0.00200	)	mg/K	g	02/2	22/23 09:16	02/23/23 02:51	
m-Xylene & p-Xylene	<0.00400	U	0.00400	)	mg/K		02/2	22/23 09:16	02/23/23 02:51	
o-Xylene	<0.00200	U	0.00200	)	mg/K	-	02/2	22/23 09:16	02/23/23 02:51	
Xylenes, Total	<0.00400		0.00400	)	mg/K	-			02/23/23 02:51	
	MB	МВ								
Surrogate	%Recovery	Qualifier	Limits				F	Prepared	Analyzed	Dil F
4-Bromofluorobenzene (Surr)	85		70 - 130	-			02/	22/23 09:16	02/23/23 02:51	
1,4-Difluorobenzene (Surr)	99		70 - 130				02/	22/23 09:16	02/23/23 02:51	
Lab Sample ID: LCS 880-	-46929/1-A					Clier	nt Sa	mple ID:	Lab Control	Samp
Matrix: Solid									Prep Type: T	
Analysis Batch: 46928									Prep Batch	: 469
-			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	0.1011		mg/Kg		101	70 - 130	
Ethylbenzene			0.100	0.09373		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene			0.200	0.1915		mg/Kg		96	70 - 130	
o-Xylene			0.100	0.09836		mg/Kg		98	70 - 130	
	LCS LCS	S								
Surrogate	%Recovery Qua	alifier	Limits							
4-Bromofluorobenzene (Surr)	92		70 - 130							
1,4-Difluorobenzene (Surr)	107		70 - 130							
Lab Sample ID: LCSD 88	0-46929/2-4				ſ	lient Sa	mnle	D: I ab	Control Sam	ole Dr
Matrix: Solid						Jan Oa	mpie		Prep Type: T	
Analysis Databy 40020									Tep type. I	Jual

#### Matrix: Solid Analysis Batch: 46928

Analysis Batch: 46928							Prep E	Satch: 4	16929
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1102		mg/Kg		110	70 - 130	7	35

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4126-1 SDG: 03D2024059

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

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

Lab Sample ID: LCSD 880-46929/2-A Matrix: Solid Analysis Batch: 46928			C	Client Sa	mple	ID: Lat	Control Prep Ty Prep E		al/NA
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.1089		mg/Kg		109	70 - 130	7	35
Ethylbenzene	0.100	0.1027		mg/Kg		103	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2128		mg/Kg		106	70 - 130	11	35
o-Xylene	0.100	0.1094		mg/Kg		109	70 - 130	11	35
I CSD II	חפר								

		50	
Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

#### Lab Sample ID: 890-4123-A-1-B MS Matrix: Solid Analysis Batch: 46928

Analysis Batch: 46928									Prep Batch: 46929
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00202	U F1 F2	0.101	0.04951	F1	mg/Kg		49	70 - 130
Toluene	0.00490	F1	0.101	0.07116	F1	mg/Kg		66	70 - 130
Ethylbenzene	0.00362		0.101	0.07403		mg/Kg		70	70 - 130
m-Xylene & p-Xylene	0.00658	F1	0.202	0.1234	F1	mg/Kg		58	70 - 130
o-Xylene	0.00316	F1	0.101	0.06386	F1	mg/Kg		60	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	82		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

#### Lab Sample ID: 890-4123-A-1-C MSD Matrix: Solid Analysis Batch: 46928

1,4-Difluorobenzene (Surr)

Analysis Batch: 46928									Prep E	Batch: 4	<b>16929</b>
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U F1 F2	0.0992	0.09288	F2	mg/Kg		93	70 - 130	61	35
Toluene	0.00490	F1	0.0992	0.09288		mg/Kg		89	70 - 130	26	35
Ethylbenzene	0.00362		0.0992	0.08391		mg/Kg		81	70 - 130	13	35
m-Xylene & p-Xylene	0.00658	F1	0.198	0.1714		mg/Kg		83	70 - 130	33	35
o-Xylene	0.00316	F1	0.0992	0.08869		mg/Kg		86	70 - 130	33	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	100		70 - 130								

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

108

Lab Sample ID: MB 880-47003/ Matrix: Solid Analysis Batch: 46994	1-A						le ID: Method Prep Type: To Prep Batch:	otal/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/23/23 09:12	02/23/23 08:36	1

70 - 130

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Eurofins Carlsbad

Released to Imaging: 4/27/2023 10:16:44 AM

Job ID: 890-4126-1

SDG: 03D2024059

Client: Ensolum Project/Site: Zia Hills 1AB

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

Lab Sample ID: MB 880-4 Matrix: Solid	/003/1 <b>-</b> A						CI	ent Samp	Prep Ty		
Analysis Batch: 46994									Prep E		
	м	в мв									
Analyte		It Qualifier	RL		Unit		D	Prepared	Analyz	zed	Dil Fa
Diesel Range Organics (Over		.0 U						23/23 09:12	-		
C10-C28)						5					
Oll Range Organics (Over C28-C3	36) <50	.0 U	50.0		mg/K	g	02/	23/23 09:12	02/23/23	08:36	
		BMB									
			1 incida					Duenened	A		D:1 C-
Surrogate		<b>ry Qualifier</b>	<i>Limits</i> 70 - 130					Prepared 23/23 09:12	Analyz		Dil Fa
1-Chlorooctane		31 S1+									
o-Terphenyl	1.	31 51+	70 - 130				02/	23/23 09:12	02/23/23	08:36	
Lab Sample ID: LCS 880-4	47003/2-4					Clie	nt Sa	mple ID:	Lah Cor	trol S	amnl
Matrix: Solid						one			Prep Ty		
Analysis Batch: 46994									Prep E		
Analysis Daton. 40334			Spike	LCS	LCS				%Rec		-1100
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	·		1000	1174	guuinoi	mg/Kg		117	70 - 130		
(GRO)-C6-C10			1000								
Diesel Range Organics (Over			1000	1103		mg/Kg		110	70 - 130		
C10-C28)											
	LCS L	cs									
Surrogate	%Recovery G		Limits								
1-Chlorooctane	107		70 - 130								
o-Terphenyl	107										
Lab Sample ID: LCSD 880			70 - 130		C	lient Sa	ample	e ID: Lab			
Lab Sample ID: LCSD 880 Matrix: Solid			70 - 130		C	lient Sa	ample	e ID: Lab	Control S Prep Ty Prep E	pe: To	tal/N
Lab Sample ID: LCSD 880 Matrix: Solid			70 <sub>-</sub> 130 Spike	LCSD	LCSD	lient Sa	ample	e ID: Lab	Prep Ty	pe: To	tal/N 4700
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994				-		Unit	ample		Prep Ty Prep B	pe: To	tal/N 4700 RP
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics			Spike	-	LCSD Qualifier				Prep Ty Prep E %Rec	pe: To Batch:	tal/N 4700 RP Lim
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10			Spike Added 1000	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: RPD 26	tal/N/ 4700 RP Lim 2
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over			Spike Added	Result	LCSD Qualifier *1	Unit		%Rec	Prep Ty Prep E %Rec Limits	pe: To Batch: 	tal/N 4700 RP Lim 2
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over			Spike Added 1000	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: RPD 26	tal/N 4700 RP Lim 2
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	D-47003/3-A		Spike Added 1000	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: RPD 26	tal/N/ 4700 RP Lim 2
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	0-47003/3-A		Spike Added 1000 1000 Limits	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: RPD 26	tal/N/ 4700 RP Lim 2
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCSD L %Recovery G 75		Spike           Added           1000           1000           Limits           70 - 130	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: RPD 26	tal/N/ 4700 RP Lim 2
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	LCSD L %Recovery G		Spike Added 1000 1000 Limits	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg		<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: RPD 26	tal/N 4700 RP Lim
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	LCSD L %Recovery G 75 85		Spike           Added           1000           1000           Limits           70 - 130	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg	<u>D</u>	%Rec 91 81	Prep Ty         Prep E           %Rec         Limits           70 - 130         70 - 130	pe: To Batch: <u>RPD</u> 26 31	tal/N 4700 RP Lim 2
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123-	LCSD L %Recovery G 75 85		Spike           Added           1000           1000           Limits           70 - 130	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg	<u>D</u>	<b>%Rec</b>	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Watrix	tal/N. 4700 RP Lim 2 Spik
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid	LCSD L %Recovery G 75 85		Spike           Added           1000           1000           Limits           70 - 130	<b>Result</b> 908.0	LCSD Qualifier *1	Unit mg/Kg	<u>D</u>	%Rec 91 81	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/N. 4700 RP Lim 2 2 Spik tal/N.
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid	2-47003/3-A LCSD L %Recovery G 75 85 -A-1-F MS	ualifier	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000	<b>Result</b> 908.0 806.6	LCSD Qualifier *1 *1	Unit mg/Kg	<u>D</u>	%Rec 91 81	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/NJ 4700 RP Lim 2 2 Spik tal/NJ
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994	D-47003/3-A <i>LCSD L</i> <i>%Recovery G</i> 75 85 -A-1-F MS Sample S	ualifier	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           500           500           Spike	<b>Result</b> 908.0 806.6 <b>MS</b>	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg	<u>D</u>	81	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/NJ 4700 RP Lim 2 2 Spik tal/NJ
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994 Analyte	D-47003/3-A <i>LCSD L</i> <i>%Recovery G</i> 75 85 -A-1-F MS Sample S Result G	ample	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           50           50           50           50           Added	Result           908.0           806.6           MS           Result	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg Unit	<u>D</u>	%Rec           91           81	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/NJ 4700 RP Lim 2 2 Spik tal/NJ
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics	D-47003/3-A <i>LCSD L</i> <i>%Recovery G</i> 75 85 -A-1-F MS Sample S	ample	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           500           500           Spike	<b>Result</b> 908.0 806.6 <b>MS</b>	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg	<u>D</u>	81	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/N. 4700 RP Lim 2 2 Spik tal/N.
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10	D-47003/3-A <i>LCSD L</i> %Recovery G 75 85 -A-1-F MS Sample S Result G <49.9 U	ample ualifier *1	Spike           Added           1000           1000           1000           1000           1000           Spike           Added           999	Result           908.0           806.6           MS           Result           1211	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg Unit mg/Kg	<u>D</u>	%Rec         91         81         Client Sam         %Rec         119	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/NJ 4700 RP Lim 2 2 Spik tal/NJ
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics	D-47003/3-A <i>LCSD L</i> <i>%Recovery G</i> 75 85 -A-1-F MS Sample S Result G	ample ualifier *1	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           50           50           50           50           Added	Result           908.0           806.6           MS           Result	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg Unit	<u>D</u>	%Rec           91           81	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/NJ 4700 RP Lim 2 2 Spik tal/NJ
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	2-47003/3-A <i>LCSD L</i> <i>%Recovery G</i> 75 85 -A-1-F MS Sample S <u>Result G</u> <49.9 U 76.8 **	ample ualifier *1	Spike           Added           1000           1000           1000           1000           1000           Spike           Added           999	Result           908.0           806.6           MS           Result           1211	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg Unit mg/Kg	<u>D</u>	%Rec         91         81         Client Sam         %Rec         119	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Matrix pe: To	tal/N. 4700 RP Lim 2 2 Spik tal/N.
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	D-47003/3-A <i>LCSD L</i> <i>%Recovery G</i> 75 85 -A-1-F MS Sample S <u>Result G</u> <49.9 U 76.8 */	ample ualifier *1	Spike           Added           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           1000           Limits           70 - 130           70 - 130           Spike           Added           999           999	Result           908.0           806.6           MS           Result           1211	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg Unit mg/Kg	<u>D</u>	%Rec         91         81         Client Sam         %Rec         119	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Watrix pe: To	tal/NJ 4700 RP Lim 2 2 Spik tal/NJ
Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-4123- Matrix: Solid Analysis Batch: 46994 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	2-47003/3-A <i>LCSD L</i> <i>%Recovery G</i> 75 85 -A-1-F MS Sample S <u>Result G</u> <49.9 U 76.8 **	ample ualifier *1	Spike           Added           1000           1000           1000           1000           1000           Spike           Added           999	Result           908.0           806.6           MS           Result           1211	LCSD Qualifier *1 *1	Unit mg/Kg mg/Kg Unit mg/Kg	<u>D</u>	%Rec         91         81         Client Sam         %Rec         119	Prep Ty Prep E %Rec Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep E %Rec Limits 70 - 130	pe: To Batch: <u>RPD</u> 26 31 Watrix pe: To	tal/NJ 4700 RP Lim 2 2 Spik tal/NJ

**Eurofins Carlsbad** 

102

o-Terphenyl

70 - 130

Job ID: 890-4126-1 SDG: 03D2024059

Client: Ensolum Project/Site: Zia Hills 1AB

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

-	-A-1-G MSD					Client S	Samp	le ID: N	latrix Spil		
Matrix: Solid									Prep Ty	pe: Tot	al/NA
Analysis Batch: 46994									Prep E	Batch: 4	47003
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	998	986.4		mg/Kg		97	70 - 130	20	20
Diesel Range Organics (Over C10-C28)	76.8	*1	998	993.4		mg/Kg		92	70 - 130	12	20
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane	95		70 - 130								
o-Terphenyl	89		70 - 130								
lethod: 300.0 - Anion	s, Ion Chro	omatogra	ohy								
Lab Sample ID: MB 880-4	6847/1-A						Clie	ent Sam	nple ID: M	ethod	Blanl
Matrix: Solid									Prep T	ype: So	oluble
Analysis Batch: 46985											
		MB MB									
Analyte	Re	sult Qualifier		RL	Unit		) Р	repared	Analyz	zed	Dil Fa
Chloride	<	5.00 U		5.00	mg/K	g			02/23/23	01:57	
Matrix: Solid	46847/2-A					Cliei	nt Sai	mpie iD	: Lab Cor Prep Ty		
Matrix: Solid Analysis Batch: 46985	46847/2-A		Spike	-	LCS		nt Sai		Prep Ty %Rec		
Matrix: Solid Analysis Batch: 46985 <sup>Analyte</sup>	46847/2-A		Added	Result	LCS Qualifier	Unit	nt Sai	%Rec	Prep Ty %Rec Limits		
Matrix: Solid Analysis Batch: 46985 <sup>Analyte</sup>	46847/2-A 		•	-					Prep Ty %Rec		
Matrix: Solid Analysis Batch: 46985 Analyte Chloride			Added	Result	Qualifier	Unit mg/Kg	D	<b>%Rec</b> 98	Prep Ty %Rec Limits 90 - 110	ype: So	olubl
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880			Added	Result	Qualifier	Unit mg/Kg	D	<b>%Rec</b> 98	Prep Ty %Rec Limits	ype: So  Sample	e Duj
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid			Added	Result	Qualifier	Unit mg/Kg	D	<b>%Rec</b> 98	Prep Ty %Rec Limits 90 - 110	ype: So  Sample	e Duj
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid			Added	<b>Result</b> 245.9	Qualifier	Unit mg/Kg	D	<b>%Rec</b> 98	Prep Ty %Rec Limits 90 - 110	ype: So  Sample	e Dup
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985			Added 250	Result 245.9 LCSD	Qualifier	Unit mg/Kg	D	<b>%Rec</b> 98	Prep Ty %Rec Limits 90 - 110 Control Prep Ty	ype: So  Sample	e Dup bluble RPI
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte			Added 250 Spike	Result 245.9 LCSD	Qualifier	Unit mg/Kg Client Sa	D mple	%Rec 98 ID: Lat	Prep Ty %Rec Limits 90 - 110 O Control Prep Ty %Rec	ype: So Sample ype: So	e Dup oluble RPI Limi
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride	0-46847/3-A		Added 250 Spike Added	Result 245.9 LCSD Result	Qualifier	Unit mg/Kg Client Sa Unit	D mple D	%Rec         98           ID: Lat	Prep Ty %Rec Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110	ype: So Samplo ype: So <u>RPD</u> 3	e Duj blubl Dlubl RPI Limi 2
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125	0-46847/3-A		Added 250 Spike Added	Result 245.9 LCSD Result	Qualifier	Unit mg/Kg Client Sa Unit	D mple D	%Rec         98           ID: Lat	Prep Ty %Rec Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110 mple ID: 1	ype: So Sample ype: So <u>RPD</u> 3 Matrix 5	e Dup oluble RPI Limi 20 Spike
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125- Matrix: Solid	0-46847/3-A		Added 250 Spike Added	Result 245.9 LCSD Result	Qualifier	Unit mg/Kg Client Sa Unit	D mple D	%Rec         98           ID: Lat	Prep Ty %Rec Limits 90 - 110 Control Prep Ty %Rec Limits 90 - 110	ype: So Sample ype: So <u>RPD</u> 3 Matrix 5	e Duj olubli RPI Limi 2 Spiko
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125- Matrix: Solid	0-46847/3-A 		Added 250 Spike Added 250	Result 245.9 LCSD Result 254.3	Qualifier ( LCSD Qualifier	Unit mg/Kg Client Sa Unit	D mple D	%Rec         98           ID: Lat	Prep Ty %Rec Limits 90 - 110 O Control Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty	ype: So Sample ype: So <u>RPD</u> 3 Matrix 5	e Dup oluble RPI Limi 20 Spike
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125 Matrix: Solid Analysis Batch: 46985	0-46847/3-A 	Sample Qualifier	Added 250 Spike Added	Result 245.9 LCSD Result 254.3	Qualifier LCSD Qualifier MS	Unit mg/Kg Client Sa Unit	D mple D Cl	%Rec 98 ID: Lak <u>%Rec</u> 102	Prep Ty %Rec Limits 90 - 110 O Control Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec	ype: So Sample ype: So <u>RPD</u> 3 Matrix 5	e Dup oluble RPI Limi 20 Spike
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125 Matrix: Solid Analysis Batch: 46985 Analyte	0-46847/3-A 		Added 250 Spike Added 250 Spike	Result 245.9 LCSD Result 254.3	Qualifier ( LCSD Qualifier	Unit mg/Kg Client Sa Unit mg/Kg	D mple D	%Rec         98           ID: Lat	Prep Ty %Rec Limits 90 - 110 O Control Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty	ype: So Sample ype: So <u>RPD</u> 3 Matrix 5	e Duj olubli RPI Limi 2 Spiko
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125	0-46847/3-A -A-1-B MS Sample Result 363		Added 250 Spike Added 250 Spike Added	Result 245.9 LCSD Result 254.3 MS Result	Qualifier LCSD Qualifier MS	Unit mg/Kg Client Sa Unit mg/Kg	<u>D</u> mple <u>D</u> <u>D</u>	%Rec           98           ID: Lak           %Rec           102           lient Sa           %Rec           90	Prep Ty %Rec Limits 90 - 110 O Control Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec Limits 90 - 110	ype: So Sample ype: So <u>RPD</u> 3 Matrix So ype: So ke Dup	e Du blubi RPI Lim 2 Spik blubi
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125 Matrix: Solid	0-46847/3-A -A-1-B MS Sample Result 363		Added 250 Spike Added 250 Spike Added	Result 245.9 LCSD Result 254.3 MS Result	Qualifier LCSD Qualifier MS	Unit mg/Kg Client Sa Unit mg/Kg	<u>D</u> mple <u>D</u> <u>D</u>	%Rec           98           ID: Lak           %Rec           102           lient Sa           %Rec           90	Prep Ty           %Rec           Limits           90 - 110           O Control Prep Ty           %Rec           Limits           90 - 110           %Rec           Limits           90 - 110           %Rec           Limits           90 - 110           %Rec           Limits           90 - 110	ype: So Sample ype: So <u>RPD</u> 3 Matrix So ype: So ke Dup	e Duj blubli RPI Limi 2 Spiko blubli
Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125 Matrix: Solid	D-46847/3-A -A-1-B MS Sample Result 363 -A-1-C MSD		Added 250 Spike Added 250 Spike Added	Result 245.9 LCSD Result 254.3 MS Result 589.7	Qualifier LCSD Qualifier MS	Unit mg/Kg Client Sa Unit mg/Kg	<u>D</u> mple <u>D</u> <u>D</u>	%Rec           98           ID: Lak           %Rec           102           lient Sa           %Rec           90	Prep Ty %Rec Limits 90 - 110 O Control Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec Limits 90 - 110	ype: So Sample ype: So <u>RPD</u> 3 Matrix So ype: So ke Dup	e Dup bluble RPI Limi 20 Spike bluble
Lab Sample ID: LCS 880- Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125- Matrix: Solid Analysis Batch: 46985 Analyte Chloride Lab Sample ID: 890-4125- Matrix: Solid Analysis Batch: 46985 Analyte Analysis Batch: 46985 Analysis Batch: 46985 Analysis Batch: 46985	D-46847/3-A -A-1-B MS Sample Result 363 -A-1-C MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added 253	Result 245.9 LCSD Result 254.3 MS Result 589.7	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg Client Sa Unit mg/Kg	<u>D</u> mple <u>D</u> <u>D</u>	%Rec           98           ID: Lak           %Rec           102           lient Sa           %Rec           90	Prep Ty %Rec Limits 90 - 110 O Control Prep Ty %Rec Limits 90 - 110 mple ID: I Prep Ty %Rec Limits 90 - 110 Matrix Spil Prep Ty	ype: So Sample ype: So <u>RPD</u> 3 Matrix So ype: So ke Dup	e Dup oluble RPC Limi 20 Spike oluble

### **QC Association Summary**

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4126-1 SDG: 03D2024059

### GC VOA

### Prep Batch: 46868

ep Batch: 46868					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-46868/5-A	Method Blank	Total/NA	Solid	5035	
nalysis Batch: 4692	28				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4126-1	SS06	Total/NA	Solid	8021B	46929
MB 880-46868/5-A	Method Blank	Total/NA	Solid	8021B	46868
MB 880-46929/5-A	Method Blank	Total/NA	Solid	8021B	46929
LCS 880-46929/1-A	Lab Control Sample	Total/NA	Solid	8021B	46929
LCSD 880-46929/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46929
890-4123-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	46929
890-4123-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46929
rep Batch: 46929					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4126-1	SS06	Total/NA	Solid	5035	
MB 880-46929/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46929/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46929/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4123-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-4123-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
analysis Batch: 4704	19				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4126-1		Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Analysis Batch: 46994

Lab Sample ID 890-4126-1	Client Sample ID	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 47003
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015B NM	47003
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47003
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47003
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	47003
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47003

#### Prep Batch: 47003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4126-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 47107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4126-1	SS06	Total/NA	Solid	8015 NM	

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Released to Imaging: 4/27/2023 10:16:44 AM

### **QC Association Summary**

Client: Ensolum Project/Site: Zia Hills 1AB

### HPLC/IC

#### Leach Batch: 46847

each Batch: 46847						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-4126-1	SS06	Soluble	Solid	DI Leach		
MB 880-46847/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-46847/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-46847/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-4125-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach		
890-4125-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		
Analysis Batch: 4698	35					
-						۲ ک

### Analysis Batch: 46985

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-4126-1	SS06	Soluble	Solid	300.0	46847
MB 880-46847/1-A	Method Blank	Soluble	Solid	300.0	46847
LCS 880-46847/2-A	Lab Control Sample	Soluble	Solid	300.0	46847
LCSD 880-46847/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46847
890-4125-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	46847
890-4125-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46847

**Eurofins Carlsbad** 

### Job ID: 890-4126-1 SDG: 03D2024059

Initial

Amount

Final

Amount

Batch

Number

Client: Ensolum Project/Site: Zia Hills 1AB

Prep Type

#### Client Sample ID: SS06 Date Collected: 02/15/23 14:35 Date Received: 02/17/23 08:20

Batch

Туре

Batch

Method

Job ID: 890-4126-1 SDG: 03D2024059

## Lab Sample ID: 890-4126-1

Analyst

Prepared

or Analyzed

Matrix: Solid

Lab

	•••						-	-	
Total/NA	Prep	5035		4.96 g	5 mL	46929	02/22/23 09:16	EL	EET MID
Total/NA	Analysis	8021B	1	5 mL	5 mL	46928	02/23/23 11:07	MNR	EET MID
Total/NA	Analysis	Total BTEX	1			47049	02/23/23 12:18	AJ	EET MID
Total/NA	Analysis	8015 NM	1			47107	02/23/23 16:21	AJ	EET MID
Total/NA	Prep	8015NM Prep		10.04 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM	1	1 uL	1 uL	46994	02/23/23 13:10	AJ	EET MID
Soluble	Leach	DI Leach		5 g	50 mL	46847	02/21/23 13:15	KS	EET MID
Soluble	Analysis	300.0	1			46985	02/23/23 02:33	CH	EET MID

Dil

Factor

Run

#### Laboratory References:

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

**Accreditation/Certification Summary** 

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4126-1 SDG: 03D2024059

### Laboratory: Eurofins Midland

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

Authority		ogram	Identification Number	Expiration Date
exas	NE	LAP	T104704400-22-25	06-30-23
The following analyter	are included in this repo	rt but the laboratory is r	not certified by the governing authority.	This list may include analytes for whic
the agency does not c		rt, but the laboratory is i	for contined by the governing dutionty.	This list may monde analytes for which
0,		Matrix	Analyte	
the agency does not c	ffer certification.		, , , , ,	

**Eurofins Carlsbad** 

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10

### **Method Summary**

Client: Ensolum Project/Site: Zia Hills 1AB Job ID: 890-4126-1 SDG: 03D2024059

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

#### Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Sample Summary

Page 66 of 80

Client: Ensolu	m	Sample Sur	nmary	Job ID: 890-4126-1	1
Project/Site: Z				SDG: 03D2024059	
Lab Sample ID	Client Sample ID	Matrix	Collected Received	Depth	
890-4126-1	SS06	Solid	02/15/23 14:35 02/17/23 08:20	0.5'	
					5
					8
					9
					12
					13

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Revised Date: 08/25/2020 Rev. 2020 2		6					C L
4 304- ×-11-23 0820	Amongo	· Theapur	117/23 07502	d	ennar	AL O	A MANANA
Date/Time	ure) Received by: (Signature)	Relinquished by: (Signature)	Date/Time		Received by (Signature)	ure)	Reindushed by: (Signature)
	ms and conditions eyond the control ss previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Xenco, Aminimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated of the control of th	rofins Xenco, its affiliates and s enses incurred by the client if s Eurofins Xenco, but not analy	er from client company to Eu nsibility for any losses or expe or each sample submitted to	is constitutes a valid purchase ord es and shall not assume any respo b each project and a charge of \$5	d relinquishment of sample e only for the cost of sample of \$85.00 will be applied to	Notice: Signature of this document an of service. Eurofins Xenco will be liable of Eurofins Xenco. A minimum charge
Ag SiO <sub>2</sub> Na Sr II Sn O V Zn Hg: 1631/245.1/7470/7471	li K Se	A 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	Al Sb As Ba Be B Cd CRA Sb As Ba Be Cd C	M Texas 11 AI S PLP 6010 : 8RCRA	8RCRA 13PPM yzed TCLP / SPLF	200.8 / 6020: etal(s) to be anal	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed
1 SOM TROUM			111	-2 0 1	2-15-25 1435.	S	S202
Sample Comments		V		Depth Grab/ # of Comp Cont	Date Time Sampled Sampled	Matrix	Sample Identification
		-	PH	27	Corrected Temperature:	-	Total Containers:
Zn Acetate+NaOH: Zn	of Custody	890-4126 Chain o	F F	2.4	Temperature Reading:	Yes No N/A	Sample Custody Seals:
Na 2S 2O 3: NaSO 3			K	22	Correction Factor:	RIA	Cooler Custody Seals:
NaHSO ": NABIS			5	The SC + rame	eter		Samples Received Intact:
H <sub>3</sub> PO <sub>4</sub> : HP				Yes No	Yes No Wet Ice:	Temp Blank:	SAMPLE RECEIPT
2				TAT starts the day received by the lab, if received by 4:30pm	TAT starts the the lab, if rec	CALLED INVITE	PO #:
					LLLI Due Date:	C(X) 1 (0)	Project Location: 52
			• ·	Rush Code	Routine	10241059	Project Number:
Preservative Codes	JEST	ANALYSIS REQU		Turn Around	1	ia Hills LAB	Project Name: 7
ADaPT Other:	Deliverables: EDD				Email:	2-551-9895	Phone:
PST/UST	Reporting: Level II Level II	d. WM 88270	Nourispece	City, State ZIP:	VI 88770	NV maden	City, State ZIP:
	State of Project:	1 Parts Hury	SIZ Nort	Address:	15 Huy	2 Natilar	Address: 3/2
UST/PST PRP Brownfields RRC Superfund	Program: UST/PST PR	LICO	a nonum	Company Name:	(	Kolum, U	Company Name:
Work Order Comments	Wort	Ininas	1 Know lev	Bill to: (if different)	EEN	INLIEP-106	Project Manager:
www.xenco.com Page   of	www.xe	661 C-006 (C/C) MN	HODDS, NM (575) 392-7550, Carisbad, NM (575) 900-5199	HODDS, NM			
		TX (806) 794-1296	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	EL Paso, TX		Xenco	
der No:	Work Order No:	io, TX (210) 509-3334	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Midland, TX (	<b>Environment Testing</b>		
		TX (214) 902-0300	Houston TX (281) 240-4200 Dallas, TX (214) 902-0300	Houston T		S	eurofins
		tody	Chain of Custody				

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Chain of Custody

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### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

#### Login Number: 4126 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	N/A	

List Source: Eurofins Carlsbad

Job Number: 890-4126-1 SDG Number: 03D2024059

List Source: Eurofins Midland

List Creation: 02/21/23 08:18 AM

### Login Sample Receipt Checklist

Client: Ensolum

<6mm (1/4").

#### Login Number: 4126 List Number: 2 Creator: Teel, Brianna

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

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## APPENDIX B

Lithologic / Soil Sampling Logs

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								Sample Name: BH01	Date: 02/15/2023		
			NI	C			NЛ	Site Name: Zia Hills 19-1			
<b>E N S O L U M</b>						Incident Number:					
							Job Number: 03D2024049				
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: J. Falcomata	Method: Air Rotary			
	inates: 32							Hole Diameter: 6"	Total Depth: 110'		
		-				-		er was observed within the soil bor d bentonite chips.	ing after at least 72 hours.		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions		
					1 - -	L - -					
D	-	-	N	-		- - 10	GW	WELL GRADED GRAVEL W/ coarse to medium grained, odor.	,		
D	-	-	N	-		- 20	SM	SILTY SAND W/ GRAVEL: very fine to fine to medium grained, tan to slightly reddish brown, no odor.			
D	-	-	N	-		- 30	SM	SILTY SAND: very fine to fine grained, tan to light brown, no odor.			
М	-	-	N	-		- 40	SM	SILTY SAND: very fine to fine grained, tan to light brown, slightly damp, no odor.			
М	-	-	N	-		- 50	SM	SILTY SAND: very fine to fine grained, tan to light brown, slightly damp, no odor.			
D	-	-	N	-		- 60 -	SM	SILTY SAND: very fine to fin light brown, dry, no odor.	e grained, tan to very		
М	-	-	N	-		- 70	SM	SILTY SAND: very fine to fin to medium brown, dry, no o			
М	-	-	N	-	- - 1	- 80 -	SP-SC	POORLY GRADED SAND W/ CLAY: very fine grained, medium to dark brown, slightly damp, no odor.			
М	-	-	N	-		- 90	SC	CLAYEY SAND: very fine gra damp, no odor.	ined, medium brown,		
М	-	-	Ν	-		100	SC	CLAYEY SAND: very fine gra damp, no odor.			
Μ	-	-	Ν	-		110	SC	CLAYEY SAND: very fine gra damp, no odor.	ined, medium brown,		
	Total Depth @ 110 feet bgs										



## APPENDIX C

Final C-141

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	NAPP2216037138
District RP	
Facility ID	fAPP2129428702
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible Party	ConocoPhillips Company	OGRID	217817
Contact Name	Charles Beauvais	Contact Telephone	(575) 988-2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2216037138
Contact mailing address	600 West Illinois Avenue, Midlar	nd, Texas 79701	

### **Location of Release Source**

Latitude

32.02837

-103.72221

Longitude \_\_\_\_\_ (NAD 83 in decimal degrees to 5 decimal places)

Site Name	Zia Hills 19-1	Site Type	Tank Battery
Date Release Discovered	<sup>i</sup> May 27, 2022	API# (if applicable)	

Unit Letter	Section	Township	Range	County
E	19	26S	32E	Lea

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

### Nature and Volume of Release

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

Crude Oil	Volume Released (bbls) 6.45	Volume Recovered (bbls) 0		
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)		
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No		
Condensate	Volume Released (bbls)	Volume Recovered (bbls)		
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)		
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)		
Cause of Release The release was c This release was c	aused by a leaking flow line due to corros on the pad.	ion.		

)

Page 2

Incident ID	NAPP2216037138
District RP	
Facility ID	fAPP2129428702
Application ID	

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

### **Initial Response**

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

The source of the release has been stopped.

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

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

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

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

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

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

Printed Name Brittany N. Esparza Signature: Brittany.Esparza@ConocoPhillips.com	Title: Environmental Technician Date: 6/9/2022 Telephone: (432) 221-0398
OCD Only Received by: Jocelyn Harimon	Date:06/09/2022

### L48 Spill Volume Estimate Form

): 6/9/2	022c1i0	<u>/: 2l2r//3&amp;4/M</u> mber:	Zia Hills 1B/A BTF					Page 3 of $\frac{3}{22}$
		Asset Area:	Delaware East	elaware East NAPP2216037138				37138
Releas	e Disco	very Date & Time:	27 MAY 2022 10:25	MAG				M
		Release Type:	Oil					
ny know	/n detail/	s about the event:						
				Spil	<b>Calculatior</b>	1 - On Pad Surface	Pool Spill	
Convert Irregular shape into a series of rectangles Length (ft.) Width (ft.) (ft.) Deepest point in each of the areas (in.)					Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
21.0	37.0	2.00	4	777.000	0.042	5.763	0.002	5.775
9.0	18.0	0.50	4	162.000	0.010	0.300	0.001	0.301
7.0	29.0	0.50	4	203.000	0.010	0.376	0.001	0.377
				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ing: 6/	9/2022	11:38:30 AM		0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
				89 - NS			fotal Volume Release:	6.452
	Releas	Release Discor ny known details Length (ft.) 21.0 37.0 9.0 18.0 7.0 29.0 4 7.0 29.0 4 7.0 29.0 4 7.0 7.0 29.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	Asset Area: Release Discovery Date & Time: Release Type: ny known details about the event: Length (ft.) Deepest point in each of the areas (in.) 21.0 37.0 2.00 9.0 18.0 0.50	Release Type:Oilny known details about the event:OilLength (ft.)Width (ft.)Deepest point in each of the areas (in.)No. of boundaries of "shore" in each area21.037.02.0049.018.00.5047.029.00.5049.018.00.5049.018.00.5049.018.00.5049.018.00.5049.018.00.5049.018.00.5049.018.00.5049.018.00.5049.018.00.5049.018.0119.018.0119.018.0119.018.0119.018.0119.018.0119.019.0119.010.50119.010.50119.010.50119.010.50119.010.50119.010.50119.010.50119.010.50119.010.50119.010.50119.010.50119.010.50119.0	b: 6/9/2022:10: 23:rt83:41 mber:         Zia Hills 1B/A BTF           Asset Area:         Delaware East           Release Discovery Date & Time:         27 MAY 2022 10:29AM           Release Discovery Date & Time:         27 MAY 2022 10:29AM           Release Type:         Oil           Image: Release Type:         Oil           Spill           Length (ft.)         Deepest point in each of the areas (in.)         No. of boundaries of "shore" in each area         Estimated Pool Area (sq. ft.)           21.0         37.0         2.00         4         777.000           9.0         18.0         0.50         4         162.000           7.0         29.0         0.50         4         203.000           0.000         0.000         0.000         0.000         0.000	b: 6/9/2022c10: 22art/3341/mber:         Zia Hills 1B/A BTF           Asset Area: Delaware East           Release Discovery Date & Time: 27 MAY 2022 10:29AM           Release Type: Oil           Spill Calculation           Release Type: Oil           Spill Calculation           Spill Calculation           Length (ft.)           Deepest point in (ft.)         Deepest point in each of the areas (in.)         No. of boundaries of "shore" in each area         Estimated Pool         Average Depth (ft.)           21.0         37.0         2.00         4         777.000         0.042           9.0         18.0         0.50         4         162.000         0.010           7.0         29.0         0.50         4         203.000         0.010           7.0         29.0         0.50         4         203.000         0.010           7.0         29.0         0.50         4         203.000         0.010           7.0         29.0         0.50         4         203.000         0.010           7.0         29.0         0.50         4         203.000         0.010           0.000         #DIV/0!	c: 6/9/2022c10; 23:rt/33:41Minber:       Zia Hills 1B/A BTF         Asset Area: Delaware East         Release Discovery Date & Time: 27 MAY 2022 10:29AM         Release Type: Dil         Spill Calculation - On Pad Surface         Spill Calculation - On Pad Surface         Length (ft.)         Width (ft.)       Deepest point in each of the areas (in.)       No. of boundaries of "shore" in each area       Estimated Pool Area (sq. ft.)       Estimated volume of each pool area (bl.)         21.0       37.0       2.00       4       777.000       0.042       5.763         9.0       18.0       0.50       4       162.000       0.010       0.300         7.0       29.0       0.50       4       203.000       0.010       0.376         0       0.000       #DIV/0!       #DIV/0!       #DIV/0!       #DIV/0!       #DIV/0!         0       0.000       #DIV/0!       #	Zia Hills 1B/A BTF           NAPP221603           Release Discovery Date & Time: 27 MAY 2022 10:29AM           Release Discovery Date & Time: 27 MAY 2022 10:29AM           Release Type: Oil           Release Type: Oil           Spill Calculation - On Pad Surface Pool Spill           Length (ft.)         Deepest point in each of the areas (in.)         No. of boundaries of "shore" in each area         Estimated Pool (sq. ft.)         Estimated Average Depth (ft.)         Penetration allowance (bbl.)         Penetration allowance (ft.)           21.0         37.0         2.00         4         777.000         0.042         5.763         0.002         9.0         0.001         0.300         0.001         0.300         0.001         0.300         0.001         0.001         0.376         0.001         0.001         0.376         0.001         0.001         0.376         0.001         0.001         0.001         0.010         0.010         0.010         0.011         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001         0.001

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

District III

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

District IV

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

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

WV ##:91:01 E207/27/# :SuiSpul of passala 14

CONDITIONS

Action 115399

CONDITIONS

Operator:	OGRID:
CONOCOPHILLIPS COMPANY	217817
600 W. Illinois Avenue	Action Number:
Midland, TX 79701	115399
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By		Condition Date
jharimon	None	6/9/2022

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District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

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

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

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

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

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

Received by OCD: 3/24/2023 1:05:36 PM Form C-141 State of New Mexico			Page 78 of 8		
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			Facility ID		
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regulations all operators a public health or the envir failed to adequately inves addition, OCD acceptanc and/or regulations. Printed Name:Jacob	nformation given above is true and complete are required to report and/or file certain rele- comment. The acceptance of a C-141 report tigate and remediate contamination that por e of a C-141 report does not relieve the ope of Laird	ease notifications and perform by the OCD does not relieve the ose a threat to groundwater, sur erator of responsibility for com 	corrective actions for rele he operator of liability sh face water, human health	eases which may endanger ould their operations have or the environment. In deral, state, or local laws	
OCD Only Received by: Jo	ocelyn Harimon	Date:(	03/27/2023		

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## Closure

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

<b><u>Closure Report Attachment Checklist</u>:</b> Each of the following in	tems must be inc	luded in the closure report.
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC	
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integ	rity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate ODC	C District office n	nust be notified 2 days prior to final sampling)
Description of remediation activities		
I hereby certify that the information given above is true and comple and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rem human health or the environment. In addition, OCD acceptance of a compliance with any other federal, state, or local laws and/or regula restore, reclaim, and re-vegetate the impacted surface area to the con accordance with 19.15.29.13 NMAC including notification to the O Printed Name:Jacob Laird Signature:Accob email:Jacob.Laird@conocophillips.com	n release notifica a C-141 report b nediate contamin a C-141 report do tions. The respo nditions that exis CD when reclam Title: _Environn Date:	tions and perform corrective actions for releases which y the OCD does not relieve the operator of liability ation that pose a threat to groundwater, surface water, bes not relieve the operator of responsibility for nsible party acknowledges they must substantially ted prior to the release or their final land use in
OCD Only		
Received by: Jocelyn Harimon	Date:	03/27/2023
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface v party of compliance with any other federal, state, or local laws and/o	water, human hea	
Closure Approved by:	Date:	04/27/2023
Printed Name: Jennifer Nobui	_ Title:	Environmental Specialist A

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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
CONOCOPHILLIPS COMPANY	217817
600 W. Illinois Avenue	Action Number:
Midland, TX 79701	200643
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By		Condition Date
jnobui	Closure Report Approved.	4/27/2023

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