

February 15, 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

**VGEU 30-01** 

**Incident Number NAPP2200643457** 

Lea County, New Mexico

#### To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Permian, LLC (Maverick), has prepared this *Closure Request* to document excavation, soil sampling activities, and a 20-mil impermeable liner installation performed at the VGEU 30-01 (Site) as outlined in an approved *Revised Remediation Work Plan (Work Plan)*, dated November 17, 2022. The release occurred under the oversight of a former operator, but Maverick purchased the asset and is responsible for resolving soil impacts. Based on the results presented in this report, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2200643457.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit O, Section 31, Township 17 South, Range 35 East, in Lea County, New Mexico (32.816111°, -103.621202°) and is associated with oil and gas exploration and production operations on New Mexico State Land (Figure 1).

On December 21, 2021, a hole in a surface flowline resulted in the release of approximately 66.4 barrels (bbls) of produced water and 7.4 bbls of crude oil into the pasture. Released fluids were unable to be recovered. The previous operator, ConocoPhillips Company (COP), reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on January 6, 2022. The release was assigned Incident Number NAPP2200643457.

Between October 14 and 18, 2022, additional delineation activities were conducted at the Site to further evaluate the vertical extent of impacted soil as per the denial from the original *Work Plan*, dated September 21, 2022. Delineation soil samples were collected from additional depths from pothole locations PH01, PH02, and PH05 ranging from 3 feet to 19 feet below ground surface (bgs). Field screening and laboratory analytical results indicated elevated total petroleum hydrocarbon (TPH) and/or chloride concentrations existed from the ground surface to 16 feet bgs beneath the release area. As a result, Maverick submitted a *Work Plan* and proposed:

(1) excavation and disposal of impacted soil from the top 4 feet of the subsurface;

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 601 North Marienfeld Street, Suite 400 | Midland, TX 78209 | ensolum.com

- (2) confirmation sampling every 200 square feet of the excavation sidewalls;
- (3) installation of a 20-mil impermeable poly liner on the floor of the excavation at a depth of approximately 4 feet bgs to mitigate further vertical migration of residual chloride impacts; and
- (4) backfill and recontouring of the Site to match pre-existing conditions followed by re-seeding the disturbed area with the appropriate Bureau of Land Management (BLM) seed mixture.

The *Work Plan* was approved by NMOCD on November 17, 2022, via email with no conditions. The lithologic sampling logs, laboratory analytical results and sample locations for Site delineation can be referenced in the *Work Plan*. Continuing below is a description of work completed following the approval of the *Work Plan*.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

As documented in the *Work Plan*, the following NMOCD Table I Closure Criteria (Closure Criteria) apply (Figure 1):

Benzene: 10 milligrams per kilogram (mg/kg)

Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

TPH: 100 mg/kg

Chloride: 600 mg/kg

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

Between January 11 and 18, 2023, Ensolum personnel were onsite to oversee excavation activities as detailed in the approved *Work Plan*. Excavation activities were performed via track-hoe and transport vehicles. To direct excavation activities, soil was field screened for volatile organic compounds (VOCs) with a calibrated photoionization dectector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Photographic documentation is included in Appendix A.

Following removal of impacted soil, 5-point composite excavation confirmation soil samples were collected every 200 square feet from the sidewalls of the excavation. The excavation confirmation samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Excavation confirmation soil samples SW01 through SW08 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. The excavation sidewall sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on 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): 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.



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#### LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for confirmation soil samples SW03 and SW04 indicated all COC concentrations were compliant with Closure Criteria. Laboratory analytical results for excavation confirmation soil samples SW01, SW02, and SW05 through SW08 indicated one or more COC concentrations exceeded Closure Criteria. Laboratory analytical results are provided on Table 1 and laboratory analytical reports are included as Appendix B.

#### ADDITIONAL EXCAVATION AND SOIL SAMPLING ACTIVITIES

Between January 19 and 25, 2023, Ensolum personel returned to the Site to oversee additional excavation activities as warranted by laboratory analytical results for soil samples SW01, SW02, and SW05 through SW08. Excavation activities were resumed via track-hoe and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride as previously described. Photographic documentation is included in Appendix A.

Following further removal of impacted soil, 5-point composite excavation confirmation soil samples were collected every 200 square feet from the freshly excavated sidewalls of the excavation. Excavation confirmation soil samples SW09 through SW15 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. The excavation confirmation samples were collected, handled and analyzed as previously described. The final excavation extent and excavation sidewall sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 2.

The excavation measured approximately 17,690 square feet in areal extent and approximately 4 feet bgs in depth. A total of approximately 2,620 cubic yards of impacted soil were removed during the excavation activities. The soil was transported from the Site and properly disposed of at the R360 Environmental Solutions in Hobbs, New Mexico.

#### LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for SW09 through SW15 indicated all COC concentrations were compliant with Closure Criteria. Laboratory analytical results are provided on Table 1 and laboratory analytical reports are included as Appendix B.

#### 20-MIL IMPERMEABLE LINER INSTALLATION

A 20-mil impermeable liner has been scheduled and will be installed at approximately 4 feet bgs on the floor of the entire excavation measuring approximately 17,690 square feet. Following the liner installation, the excavation will be promptly backfilled and recontoured to match pre-existing conditions. For optimal encouragement of vegetative growth, the disturbed pasture area will be re-seeded with an approved BLM seed mixture during the next immediate growing season. Photographic documentation of the liner installation will be provided once complete.

#### **CLOSURE REQUEST**

Remediation activities were conducted as approved in the *Work Plan*. Laboratory analytical results for the final excavation confirmation sidewall soil samples indicated all COC concentrations were compliant with the Closure Criteria. Thus, the release was delineated laterally by the final excavation sidewall samples. Vertical delineation had been achieved through previous sampling activities as per the denial request for the original *Work Plan*, dated September 15, 2022. The 20-mil impermeable liner installation on the floor of the excavation will retard further migration of residual chloride impacts into the subsurface.



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Maverick believes the remediation actions described above is protective of human health, the environment, groundwater, and other sensitive receptors. As such, Maverick respectfully requests closure for Incident Number NAPP2200643457. The Final C-141 is included as Appendix C.

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

Sincerely, **Ensolum, LLC** 

Anna Byers

**Project Geologist** 

anna Byers

Kalei Jennings Senior Scientist

Kalui Jennings

cc: Bryce Wagoner, Maverick Natural Resources

New Mexico State Land Office

#### Appendices:

Figure 1 Site Location Map

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

Appendix A Photographic Log

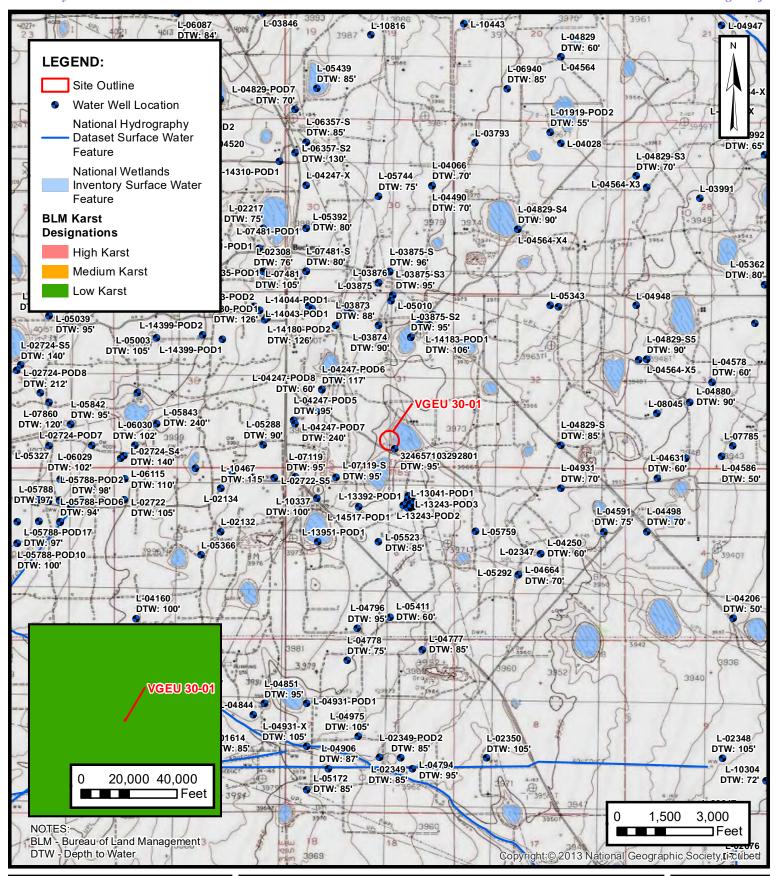
Appendix B Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix C Final C-141





**FIGURES** 

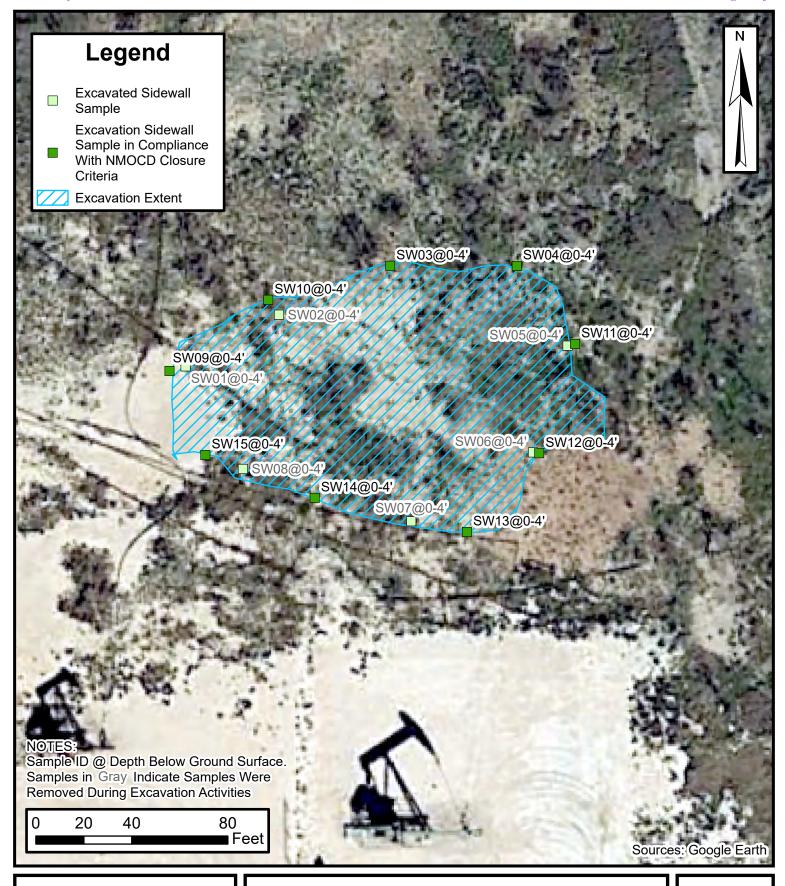




## Site Receptor Map

Maverick Permian, LLC VGEU 30-01 Incident Number: NAPP2200643457 Unit O, Sec 31, T17S, R35E Lea County, New Mexico **FIGURE** 

1





# **Excavation Soil Sample Locations**

Maverick Permian, LLC VGEU 30-01 NAPP2200643457 Unit O, Sec 31, T17S, R35E Lea County, New Mexico FIGURE

2



**TABLES** 

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# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS VGEU 30-01

Maverick Natural Resources, LLC Lea County, New Mexico

					County, New Mc							
Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)		
NMOCD Table I	Closure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600		
SW01	01/18/2023	0-4'	<0.00199	<0.00398	<50.0	61.5	<50.0	61.5	61.5	4,150		
SW02	01/18/2023	0-4'	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	2,080		
SW03	01/18/2023	0-4'	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	511		
SW04	01/18/2023	0-4'	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	503		
SW05	01/18/2023	0-4'	<0.00200	< 0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	814		
SW06	01/18/2023	0-4'	<0.00200	<0.00401	<49.9	1,000	131	1,130	1,130	1,070		
SW07	01/18/2023	0-4'	<0.00199	0.0104	<49.9	52.3	<49.9	52.3	52.3	2,860		
SW08	01/18/2023	0-4'	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	4,020		
SW09	01/25/2023	0-4'	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	213		
SW10	01/25/2023	0-4'	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	215		
SW11	01/25/2023	0-4'	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	227		
SW12	01/25/2023	0-4'	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	236		
SW13	01/25/2023	0-4'	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	227		
SW14	01/25/2023	0-4'	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	225		
SW15	01/25/2023	0-4'	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	226		

#### Notes:

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

NMOCD: New Mexico Oil Conservation Division BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

TPH: Total Petroleum Hydrocarbon

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

Grey text represents samples that have been excavated



APPENDIX A

Photographic Log



#### **Photographic Log**

Maverick Natural Resources, LLC **VGEU 30-01** Incident Number NAPP2200643457





Date: 1/25/2023 Photograph 1

Description: Final Excavation Extent

Date: 1/25/2023 Photograph 2

Description: Final Excavation Extent





Date: 1/25/2023 Photograph 3 Description: Final Excavation Extent

Date: 1/25/2023 Photograph 4

Description: Final Excavation Extent



**APPENDIX B** 

Laboratory Analytical Reports & Chain of Custody Documentation

**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Kalei Jennings Ensolum 601 N. Marienfeld St. Suite 400

Midland, Texas 79701

Generated 2/3/2023 11:13:21 AM

## **JOB DESCRIPTION**

VGEU 30-01 SDG NUMBER 03D2057005

## **JOB NUMBER**

890-3898-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information

## **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**

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

Client: Ensolum
Project/Site: VGEU 30-01
Laboratory Job ID: 890-3898-1
SDG: 03D2057005

# **Table of Contents**

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#### **Definitions/Glossary**

Job ID: 890-3898-1 Client: Ensolum Project/Site: VGEU 30-01 SDG: 03D2057005

#### **Qualifiers**

#### **GC VOA**

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

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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

**HPLC/IC** 

Qualifier **Qualifier Description** 

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

**Glossary** 

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

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

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

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

DL Detection Limit (DoD/DOE)

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

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

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

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

**TNTC** Too Numerous To Count

#### Case Narrative

Client: Ensolum

Project/Site: VGEU 30-01

Job ID: 890-3898-1

SDG: 03D2057005

Job ID: 890-3898-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3898-1

#### Receipt

The samples were received on 1/19/2023 11:42 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: SW01 (890-3898-1), SW02 (890-3898-2), SW03 (890-3898-3), SW04 (890-3898-4), SW05 (890-3898-5), SW06 (890-3898-6), SW07 (890-3898-7) and SW08 (890-3898-8).

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW01 (890-3898-1), SW02 (890-3898-2), SW03 (890-3898-3), SW04 (890-3898-4), SW05 (890-3898-5), SW06 (890-3898-6), SW07 (890-3898-7) and SW08 (890-3898-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-44625/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-3880-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: SW03 (890-3898-3) and (890-3898-A-1-F MS). Evidence of matrix interferences is not obvious.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44668 and analytical batch 880-44724 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Job ID: 890-3898-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: 03D2057005

**Client Sample ID: SW01** Lab Sample ID: 890-3898-1

Date Collected: 01/18/23 09:40 Matrix: Solid Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 20:09	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 20:09	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 20:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/23 12:09	01/27/23 20:09	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 20:09	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/24/23 12:09	01/27/23 20:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	149	S1+	70 - 130			01/24/23 12:09	01/27/23 20:09	1
1,4-Difluorobenzene (Surr)	91		70 - 130			01/24/23 12:09	01/27/23 20:09	1
- Method: TAL SOP Total BTEX - 1	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/30/23 12:32	1
Analyte	D 14							
		Qualifier	RL	Unit	D	Prepared	Analyzed	
	61.5	Qualifier	<b>RL</b> 50.0	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/03/23 11:49	
Total TPH	61.5	<u> </u>	50.0		<u>D</u>	Prepared		
Total TPH Method: SW846 8015B NM - Dies	61.5 sel Range Orga	<u> </u>	50.0		<u>D</u>	Prepared Prepared		1
Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	61.5 sel Range Orga	nics (DRO) Qualifier	50.0 (GC)	mg/Kg		<u> </u>	02/03/23 11:49	1 Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	61.5 sel Range Orga Result	nics (DRO) Qualifier	50.0 (GC)	mg/Kg		Prepared	02/03/23 11:49  Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	61.5 sel Range Orga Result <50.0	nics (DRO) Qualifier U	(GC) RL 50.0	mg/Kg  Unit  mg/Kg		Prepared 02/01/23 12:51	02/03/23 11:49  Analyzed  02/02/23 21:44	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	61.5 sel Range Orga Result <50.0 61.5	nics (DRO) Qualifier U	50.0 (GC)  RL  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/01/23 12:51 02/01/23 12:51	02/03/23 11:49  Analyzed 02/02/23 21:44 02/02/23 21:44	1 Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	61.5 sel Range Orga Result <50.0 61.5 <50.0	nics (DRO) Qualifier U	50.0  (GC)  RL  50.0  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/01/23 12:51 02/01/23 12:51 02/01/23 12:51	02/03/23 11:49  Analyzed 02/02/23 21:44 02/02/23 21:44	Dil Face 1 1 1 Dil Face
Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	61.5 sel Range Orga Result <50.0 61.5 <50.0 %Recovery	nics (DRO) Qualifier U	50.0  (GC)  RL  50.0  50.0  50.0  Limits	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/01/23 12:51 02/01/23 12:51 02/01/23 12:51 Prepared	02/03/23 11:49  Analyzed 02/02/23 21:44  02/02/23 21:44  02/02/23 21:44  Analyzed	Dil Fac
Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	61.5 sel Range Orga Result <50.0 61.5 <50.0 %Recovery 96 93	U Qualifier	50.0  (GC)  RL  50.0  50.0  50.0  Limits  70 - 130  70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/01/23 12:51 02/01/23 12:51 02/01/23 12:51  Prepared 02/01/23 12:51	02/03/23 11:49  Analyzed 02/02/23 21:44  02/02/23 21:44  Analyzed 02/02/23 21:44	Dil Fac
Total TPH  Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	61.5 sel Range Orga Result <50.0 61.5 <50.0  %Recovery 96 93 Chromatograp	U Qualifier	50.0  (GC)  RL  50.0  50.0  50.0  Limits  70 - 130  70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/01/23 12:51 02/01/23 12:51 02/01/23 12:51  Prepared 02/01/23 12:51	02/03/23 11:49  Analyzed 02/02/23 21:44  02/02/23 21:44  Analyzed 02/02/23 21:44	
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl  Method: EPA 300.0 - Anions, Ion	61.5 sel Range Orga Result <50.0 61.5 <50.0  %Recovery 96 93 Chromatograp	U Qualifier Qualifier Ohy - Solubl Qualifier	50.0  (GC)  RL  50.0  50.0  50.0  Limits  70 - 130  70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg  mg/Kg	<u>D</u>	Prepared 02/01/23 12:51 02/01/23 12:51 02/01/23 12:51  Prepared 02/01/23 12:51 02/01/23 12:51	02/03/23 11:49  Analyzed 02/02/23 21:44  02/02/23 21:44  Analyzed 02/02/23 21:44  02/02/23 21:44	Dil Fac

**Client Sample ID: SW02** Lab Sample ID: 890-3898-2

Date Collected: 01/18/23 09:45 Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 20:37	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 20:37	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 20:37	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/24/23 12:09	01/27/23 20:37	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 20:37	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/24/23 12:09	01/27/23 20:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	149	S1+	70 - 130			01/24/23 12:09	01/27/23 20:37	1

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Matrix: Solid

Sample Depth: 0-4'

Job ID: 890-3898-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: 03D2057005

Client Sample ID: SW02 Lab Sample ID: 890-3898-2

Date Collected: 01/18/23 09:45 Matrix: Solid Date Received: 01/19/23 11:42

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1 4-Difluorobenzene (Surr)	90	70 130	01/24/23 12:09	01/27/23 20:37	1

Method: TAL SOP Total BTEX - Tot	al BTEX Calculation						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Total BTEX	<0.00402	U	0.00402	mg/Kg	01/30/23 12:32	1
Method: SW846 8015 NM - Diesel Rand	ge Organi	cs (DRO) (GC)				

motriou. Otto-to ou to itim. D	lood Range Organi	100 (5110)	(33)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/03/23 11:49	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 22:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 22:45	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130	02/01/23 12:51	02/02/23 22:45	1
o-Terphenyl	82		70 - 130	02/01/23 12:51	02/02/23 22:45	1

Method: EPA 300.0 - Anions, Ion C	hromatography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorido	2080	25.2	ma/Ka			01/26/23 07:35	

Client Sample ID: SW03 Lab Sample ID: 890-3898-3

Date Collected: 01/18/23 09:50 **Matrix: Solid** Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 21:04	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 21:04	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 21:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/24/23 12:09	01/27/23 21:04	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/24/23 12:09	01/27/23 21:04	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/24/23 12:09	01/27/23 21:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	156	S1+	70 - 130			01/24/23 12:09	01/27/23 21:04	1
1,4-Difluorobenzene (Surr)	90		70 - 130			01/24/23 12:09	01/27/23 21:04	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/30/23 12:32	1

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Analyzed

02/03/23 11:49

RL

50.0

Unit

mg/Kg

Prepared

Result Qualifier

<50.0 U

Dil Fac

Analyte

Total TPH

Job ID: 890-3898-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: 03D2057005

**Client Sample ID: SW03** Date Collected: 01/18/23 09:50

Lab Sample ID: 890-3898-3 Matrix: Solid

Sample Depth: 0-4'

Date Received: 01/19/23 11:42

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		02/01/23 12:51	02/02/23 23:04	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		02/01/23 12:51	02/02/23 23:04	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/01/23 12:51	02/02/23 23:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130			02/01/23 12:51	02/02/23 23:04	1
o-Terphenyl	66	S1-	70 - 130			02/01/23 12:51	02/02/23 23:04	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 890-3898-4 Client Sample ID: SW04

Date Collected: 01/18/23 09:55 Matrix: Solid

Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 21:32	1
Toluene	< 0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 21:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 21:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/23 12:09	01/27/23 21:32	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 21:32	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/24/23 12:09	01/27/23 21:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	152	S1+	70 - 130			01/24/23 12:09	01/27/23 21:32	1
1,4-Difluorobenzene (Surr)	85		70 - 130			01/24/23 12:09	01/27/23 21:32	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/30/23 12:32	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/03/23 11:49	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/01/23 12:51	02/02/23 23:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/01/23 12:51	02/02/23 23:25	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/01/23 12:51	02/02/23 23:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			02/01/23 12:51	02/02/23 23:25	1

Project/Site: VGEU 30-01

Client: Ensolum Job ID: 890-3898-1 SDG: 03D2057005

Lab Sample ID: 890-3898-4

Matrix: Solid

Client Sample ID: SW04

Date Collected: 01/18/23 09:55 Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Method: EPA 300.0 - Anions, Ion C	hromatograp	hy - Soluble	•					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	503		4.98	mg/Kg			01/26/23 08:00	1

**Client Sample ID: SW05** Lab Sample ID: 890-3898-5 **Matrix: Solid** 

Date Collected: 01/18/23 10:00 Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 21:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 21:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 21:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/24/23 12:09	01/27/23 21:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 21:58	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/24/23 12:09	01/27/23 21:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130			01/24/23 12:09	01/27/23 21:58	1
1,4-Difluorobenzene (Surr)	89		70 - 130			01/24/23 12:09	01/27/23 21:58	1

Total BTEX	<0.00399	U	0.00399	mg/Kg			01/30/23 12:32	1
— Method: SW846 8015 NM - Diesel F	Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/03/23 11:49	1

Unit

Prepared

Analyzed

Dil Fac

Result Qualifier

_		· ·		9/119			02/00/20 11110	
- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 23:45	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 23:45	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 23:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130			02/01/23 12:51	02/02/23 23:45	1
o-Terphenyl	87		70 - 130			02/01/23 12:51	02/02/23 23:45	1

Method: EPA 300.0 - Anions, Ion Ch	romatography - So	oluble					
Analyte	Result Qualifie	r RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	814	4.99	mg/Kg			01/26/23 08:06	1

## **Client Sample Results**

 Client: Ensolum
 Job ID: 890-3898-1

 Project/Site: VGEU 30-01
 SDG: 03D2057005

Client Sample ID: SW06

Date Collected: 01/18/23 10:05

Lab Sample ID: 890-3898-6

Matrix: Solid

Date Collected: 01/18/23 10:05 Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 22:24	
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 22:24	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 22:24	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/24/23 12:09	01/27/23 22:24	
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 22:24	
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/24/23 12:09	01/27/23 22:24	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	162	S1+	70 - 130			01/24/23 12:09	01/27/23 22:24	
1,4-Difluorobenzene (Surr)	85		70 - 130			01/24/23 12:09	01/27/23 22:24	
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/30/23 12:32	
Method: SW846 8015 NM - Dies	sel Range Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	1130		49.9	mg/Kg			02/03/23 11:49	
Method: SW846 8015B NM - Di	esel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/03/23 00:04	
Diesel Range Organics (Over C10-C28)	1000		49.9	mg/Kg		02/01/23 12:51	02/03/23 00:04	
Oll Range Organics (Over C28-C36)	131		49.9	mg/Kg		02/01/23 12:51	02/03/23 00:04	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	92		70 - 130			02/01/23 12:51	02/03/23 00:04	
o-Terphenyl	83		70 - 130			02/01/23 12:51	02/03/23 00:04	
Method: EPA 300.0 - Anions, lo	n Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

Client Sample ID: SW07

Date Collected: 01/18/23 10:10

Lab Sample ID: 890-3898-7

Matrix: Solid

Date Collected: 01/18/23 10:10 Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 22:51	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 22:51	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/24/23 12:09	01/27/23 22:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/23 12:09	01/27/23 22:51	1
o-Xylene	0.0104		0.00199	mg/Kg		01/24/23 12:09	01/27/23 22:51	1
Xylenes, Total	0.0104		0.00398	mg/Kg		01/24/23 12:09	01/27/23 22:51	1

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1 A

Job ID: 890-3898-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: 03D2057005

**Client Sample ID: SW07** Lab Sample ID: 890-3898-7

Date Collected: 01/18/23 10:10 Matrix: Solid Date Received: 01/19/23 11:42

Sample Depth: 0-4'

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	153	S1+	70 - 130			01/24/23 12:09	01/27/23 22:51	1
1,4-Difluorobenzene (Surr)	88		70 - 130			01/24/23 12:09	01/27/23 22:51	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0104		0.00398	mg/Kg			01/30/23 12:32	1
Method: SW846 8015 NM - Diese	I Range Organi	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Allalyto						-		
Total TPH	52.3	<u> </u>	49.9	mg/Kg			02/03/23 11:49	1
<b>*</b>	52.3 sel Range Orga	<u> </u>		mg/Kg Unit	D	Prepared	02/03/23 11:49  Analyzed	Dil Fac
Total TPH  Method: SW846 8015B NM - Dies  Analyte  Gasoline Range Organics	52.3 sel Range Orga	nics (DRO) Qualifier	(GC)		D	Prepared 02/01/23 12:51		Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	52.3 sel Range Orga Result	nics (DRO) Qualifier	(GC)	Unit	D		Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	52.3 sel Range Orga Result <49.9 52.3	unics (DRO) Qualifier U	(GC) RL 49.9	<mark>Unit</mark> mg/Kg	<u>D</u>	02/01/23 12:51	Analyzed 02/03/23 00:25 02/03/23 00:25	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	52.3 sel Range Orga Result <49.9	unics (DRO) Qualifier U	(GC) RL 49.9	<mark>Unit</mark> mg/Kg	<u>D</u>	02/01/23 12:51	Analyzed 02/03/23 00:25	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	52.3 sel Range Orga Result <49.9 52.3	Qualifier U	(GC) RL 49.9	<b>Unit</b> mg/Kg mg/Kg	<u>D</u>	02/01/23 12:51	Analyzed 02/03/23 00:25 02/03/23 00:25	
Total TPH Method: SW846 8015B NM - Dies	52.3 sel Range Orga Result <49.9 52.3 <49.9	Qualifier U	(GC) RL 49.9 49.9 49.9	<b>Unit</b> mg/Kg mg/Kg	<u>D</u>	02/01/23 12:51 02/01/23 12:51 02/01/23 12:51	Analyzed 02/03/23 00:25 02/03/23 00:25 02/03/23 00:25	Dil Fac

Client Sample ID: SW08 Lab Sample ID: 890-3898-8

25.0

Unit

mg/Kg

mg/Kg

D

Prepared

Date Collected: 01/18/23 10:15 Date Received: 01/19/23 11:42

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

2860

<49.9 U

Sample Depth: 0-4'

Analyte

Chloride

Total TPH

	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00198	U	0.00198	mg/Kg		01/24/23 12:09	01/27/23 23:18	1
<0.00198	U	0.00198	mg/Kg		01/24/23 12:09	01/27/23 23:18	1
<0.00198	U	0.00198	mg/Kg		01/24/23 12:09	01/27/23 23:18	1
<0.00396	U	0.00396	mg/Kg		01/24/23 12:09	01/27/23 23:18	1
<0.00198	U	0.00198	mg/Kg		01/24/23 12:09	01/27/23 23:18	1
<0.00396	U	0.00396	mg/Kg		01/24/23 12:09	01/27/23 23:18	1
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
172	S1+	70 - 130			01/24/23 12:09	01/27/23 23:18	1
92		70 - 130			01/24/23 12:09	01/27/23 23:18	1
Total BTEX Cald	culation						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00396	U	0.00396	mg/Kg			01/30/23 12:32	1
	<0.00198 <0.00198 <0.00396 <0.00396 <0.00396  %Recovery 172 92  Total BTEX Calc Result	172 S1+	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198

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02/03/23 11:49

49.9

Dil Fac

**Matrix: Solid** 

Analyzed

01/26/23 08:18

## **Client Sample Results**

Client: Ensolum Job ID: 890-3898-1 Project/Site: VGEU 30-01 SDG: 03D2057005

**Client Sample ID: SW08** Lab Sample ID: 890-3898-8 Date Collected: 01/18/23 10:15

Matrix: Solid

Date Received: 01/19/23 11:42 Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/03/23 00:45	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/03/23 00:45	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/03/23 00:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			02/01/23 12:51	02/03/23 00:45	1
o-Terphenyl	91		70 - 130			02/01/23 12:51	02/03/23 00:45	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
, y co								

## **Surrogate Summary**

 Client: Ensolum
 Job ID: 890-3898-1

 Project/Site: VGEU 30-01
 SDG: 03D2057005

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Re
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3880-A-1-E MS	Matrix Spike	129	95	
890-3880-A-1-F MSD	Matrix Spike Duplicate	138 S1+	95	
890-3898-1	SW01	149 S1+	91	
890-3898-2	SW02	149 S1+	90	
890-3898-3	SW03	156 S1+	90	
890-3898-4	SW04	152 S1+	85	
890-3898-5	SW05	144 S1+	89	
890-3898-6	SW06	162 S1+	85	
890-3898-7	SW07	153 S1+	88	
890-3898-8	SW08	172 S1+	92	
LCS 880-44625/1-A	Lab Control Sample	131 S1+	99	
LCSD 880-44625/2-A	Lab Control Sample Dup	124	102	
MB 880-44625/5-A	Method Blank	88	83	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3898-1	SW01	96	93	
890-3898-1 MS	SW01	81	69 S1-	
890-3898-1 MSD	SW01	86	70	
890-3898-2	SW02	85	82	
890-3898-3	SW03	73	66 S1-	
890-3898-4	SW04	78	72	
890-3898-5	SW05	91	87	
890-3898-6	SW06	92	83	
890-3898-7	SW07	86	82	
890-3898-8	SW08	92	91	
LCS 880-45202/2-A	Lab Control Sample	87	78	
LCSD 880-45202/3-A	Lab Control Sample Dup	89	79	
MB 880-45202/1-A	Method Blank	95	94	

**Surrogate Legend** 

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3898-1 SDG: 03D2057005 Project/Site: VGEU 30-01

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44625/5-A

Analysis Batch: 44889

**Matrix: Solid** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 44625

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 12:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 12:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 12:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/24/23 12:09	01/27/23 12:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/23 12:09	01/27/23 12:24	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		01/24/23 12:09	01/27/23 12:24	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	01/24/23 12:09	01/27/23 12:24	1
1,4-Difluorobenzene (Surr)	83		70 - 130	01/24/23 12:09	01/27/23 12:24	1

Lab Sample ID: LCS 880-44625/1-A

**Matrix: Solid** 

Analysis Batch: 44889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 44625

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1090		mg/Kg		109	70 - 130	
Toluene	0.100	0.1121		mg/Kg		112	70 - 130	
Ethylbenzene	0.100	0.1157		mg/Kg		116	70 - 130	
m-Xylene & p-Xylene	0.200	0.2386		mg/Kg		119	70 - 130	
o-Xylene	0.100	0.1195		mg/Kg		119	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-44625/2-A

**Matrix: Solid** 

Analysis Batch: 44889

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

Prep Type: Total/NA

Prep Batch: 44625

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1136		mg/Kg		114	70 - 130	4	35	
Toluene	0.100	0.1013		mg/Kg		101	70 - 130	10	35	
Ethylbenzene	0.100	0.1050		mg/Kg		105	70 - 130	10	35	
m-Xylene & p-Xylene	0.200	0.2128		mg/Kg		106	70 - 130	11	35	
o-Xylene	0.100	0.1073		mg/Kg		107	70 - 130	11	35	

LCSD LCSD

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene (Surr)	124	70 - 130
1 4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: 890-3880-A-1-E MS

**Matrix: Solid** 

Analysis Batch: 44889

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

Prep Batch: 44625

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.1074		mg/Kg	_	107	70 - 130	
Toluene	<0.00201	U	0.101	0.09370		mg/Kg		93	70 - 130	

#### QC Sample Results

Client: Ensolum Job ID: 890-3898-1 Project/Site: VGEU 30-01 SDG: 03D2057005

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

Lab Sample ID: 890-3880-A-1-E MS

Lab Sample ID: 890-3880-A-1-F MSD

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 44889

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 44625

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00201	U	0.101	0.09485		mg/Kg		94	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1976		mg/Kg		98	70 - 130	
o-Xylene	<0.00201	U	0.101	0.09993		mg/Kg		99	70 - 130	

MS MS

Surrogate	%Recovery 0	Qualifier	Limits
4-Bromofluorobenzene (Surr)	129		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 44625

Analysis Batch: 44889 Sample Sample Spike MSD MSD RPD Result Qualifier Result Qualifier %Rec RPD Limit Analyte babbA Unit Limits 0.0990 Benzene <0.00201 U 0.1039 mg/Kg 105 70 - 130 3 35 0.09077 Toluene <0.00201 U 0.0990 mg/Kg 92 70 - 130 3 35 Ethylbenzene <0.00201 U 0.0990 0.08913 mg/Kg 90 70 - 130 6 35 0.198 0.1880 95 70 - 130 35 m-Xylene & p-Xylene <0.00402 U mg/Kg 5 0.0990 <0.00201 U 0.09630 97 70 - 130 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

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

Lab Sample ID: MB 880-45202/1-A

**Matrix: Solid** 

Analysis Batch: 45222

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 45202

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 20:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 20:43	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/01/23 12:51	02/02/23 20:43	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	02/01/23 12:51	02/02/23 20:43	1
o-Terphenyl	94		70 - 130	02/01/23 12:51	02/02/23 20:43	1

Lab Sample ID: LCS 880-45202/2-A

**Matrix: Solid** 

Analysis Batch: 45222

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

Prep Batch: 45202 Spike LCS LCS %Rec

Added Qualifier Analyte Result Unit %Rec Limits 999 777.2 78 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 999 928.8 mg/Kg 93 70 - 130

C10-C28)

Prep Batch: 45202

3

Job ID: 890-3898-1

90

70 - 130

Client: Ensolum Project/Site: VGEU 30-01 SDG: 03D2057005

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

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Lab Sample ID: LCS 880-45202/2-A Client Sample ID: Lab Control Sample Prep Type: Total/NA

**Matrix: Solid** Analysis Batch: 45222

LCS LCS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 87 70 - 130

Lab Sample ID: LCSD 880-45202/3-A

Analysis Batch: 45222

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

70 - 130

999

Prep Batch: 45202 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 999 761.0 76 70 - 1302 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10

903.5

mg/Kg

Diesel Range Organics (Over C10-C28)

o-Terphenyl

LCSD LCSD Surrogate %Recovery Qualifier Limits 89 70 - 130 1-Chlorooctane 79 70 - 130 o-Terphenyl

Lab Sample ID: 890-3898-1 MS Client Sample ID: SW01 Prep Type: Total/NA

**Matrix: Solid** 

**Analysis Batch: 45222** Prep Batch: 45202 Sample Sample Spike MS MS Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits

Gasoline Range Organics <50.0 U 1000 852.2 mg/Kg 82 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 61.5 1000 839.9 mg/Kg 78 70 - 130

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 81 69 S1o-Terphenyl 70 - 130

Lab Sample ID: 890-3898-1 MSD Client Sample ID: SW01

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 45222 Prep Batch: 45202

Sample Sample MSD MSD %Rec RPD Spike Qualifier Analyte Result Added Result Qualifier Unit %Rec Limits RPD Limit <50.0 U 998 868.7 84 Gasoline Range Organics mg/Kg 70 - 130 2 20 (GRO)-C6-C10 Diesel Range Organics (Over 61.5 998 856.1 mg/Kg 80 70 - 130 2 20

C10-C28)

MSD MSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 86 70 - 130 70 70 - 130 o-Terphenyl

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Client: Ensolum Job ID: 890-3898-1 Project/Site: VGEU 30-01

SDG: 03D2057005

**Prep Type: Soluble** 

Client Sample ID: SW01

**Prep Type: Soluble** 

Client Sample ID: Method Blank

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44668/1-A

**Matrix: Solid** 

Analysis Batch: 44724

MB MB

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 01/26/23 05:32

Lab Sample ID: LCS 880-44668/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 44724** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 274.3 mg/Kg 110 90 - 110

Lab Sample ID: LCSD 880-44668/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 44724

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 273.2 mg/Kg 109 90 - 110

Lab Sample ID: 890-3898-1 MS Client Sample ID: SW01 **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 44724

Spike MS MS Sample Sample %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 2500 Chloride 4150 7279 F1 125 90 - 110 mg/Kg

Lab Sample ID: 890-3898-1 MSD

**Matrix: Solid** 

Analysis Batch: 44724

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 4150 F1 2500 7272 F1 mg/Kg 125 90 - 110 0 20

## **QC Association Summary**

 Client: Ensolum
 Job ID: 890-3898-1

 Project/Site: VGEU 30-01
 SDG: 03D2057005

**GC VOA** 

Prep Batch: 44625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Total/NA	Solid	5035	
890-3898-2	SW02	Total/NA	Solid	5035	
890-3898-3	SW03	Total/NA	Solid	5035	
890-3898-4	SW04	Total/NA	Solid	5035	
890-3898-5	SW05	Total/NA	Solid	5035	
890-3898-6	SW06	Total/NA	Solid	5035	
890-3898-7	SW07	Total/NA	Solid	5035	
890-3898-8	SW08	Total/NA	Solid	5035	
MB 880-44625/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44625/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44625/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3880-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-3880-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

**Analysis Batch: 44889** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Total/NA	Solid	8021B	44625
890-3898-2	SW02	Total/NA	Solid	8021B	44625
890-3898-3	SW03	Total/NA	Solid	8021B	44625
890-3898-4	SW04	Total/NA	Solid	8021B	44625
890-3898-5	SW05	Total/NA	Solid	8021B	44625
890-3898-6	SW06	Total/NA	Solid	8021B	44625
890-3898-7	SW07	Total/NA	Solid	8021B	44625
890-3898-8	SW08	Total/NA	Solid	8021B	44625
MB 880-44625/5-A	Method Blank	Total/NA	Solid	8021B	44625
LCS 880-44625/1-A	Lab Control Sample	Total/NA	Solid	8021B	44625
LCSD 880-44625/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44625
890-3880-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	44625
890-3880-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44625

Analysis Batch: 45047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Total/NA	Solid	Total BTEX	
890-3898-2	SW02	Total/NA	Solid	Total BTEX	
890-3898-3	SW03	Total/NA	Solid	Total BTEX	
890-3898-4	SW04	Total/NA	Solid	Total BTEX	
890-3898-5	SW05	Total/NA	Solid	Total BTEX	
890-3898-6	SW06	Total/NA	Solid	Total BTEX	
890-3898-7	SW07	Total/NA	Solid	Total BTEX	
890-3898-8	SW08	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Prep Batch: 45202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Total/NA	Solid	8015NM Prep	
890-3898-2	SW02	Total/NA	Solid	8015NM Prep	
890-3898-3	SW03	Total/NA	Solid	8015NM Prep	
890-3898-4	SW04	Total/NA	Solid	8015NM Prep	
890-3898-5	SW05	Total/NA	Solid	8015NM Prep	
890-3898-6	SW06	Total/NA	Solid	8015NM Prep	

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## **QC Association Summary**

Client: Ensolum Job ID: 890-3898-1 Project/Site: VGEU 30-01 SDG: 03D2057005

GC Semi VOA (Continued)

#### Prep Batch: 45202 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-7	SW07	Total/NA	Solid	8015NM Prep	
890-3898-8	SW08	Total/NA	Solid	8015NM Prep	
MB 880-45202/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45202/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45202/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3898-1 MS	SW01	Total/NA	Solid	8015NM Prep	
890-3898-1 MSD	SW01	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 45222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Total/NA	Solid	8015B NM	45202
890-3898-2	SW02	Total/NA	Solid	8015B NM	45202
890-3898-3	SW03	Total/NA	Solid	8015B NM	45202
890-3898-4	SW04	Total/NA	Solid	8015B NM	45202
890-3898-5	SW05	Total/NA	Solid	8015B NM	45202
890-3898-6	SW06	Total/NA	Solid	8015B NM	45202
890-3898-7	SW07	Total/NA	Solid	8015B NM	45202
890-3898-8	SW08	Total/NA	Solid	8015B NM	45202
MB 880-45202/1-A	Method Blank	Total/NA	Solid	8015B NM	45202
LCS 880-45202/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45202
LCSD 880-45202/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45202
890-3898-1 MS	SW01	Total/NA	Solid	8015B NM	45202
890-3898-1 MSD	SW01	Total/NA	Solid	8015B NM	45202

#### Analysis Batch: 45391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Total/NA	Solid	8015 NM	
890-3898-2	SW02	Total/NA	Solid	8015 NM	
890-3898-3	SW03	Total/NA	Solid	8015 NM	
890-3898-4	SW04	Total/NA	Solid	8015 NM	
890-3898-5	SW05	Total/NA	Solid	8015 NM	
890-3898-6	SW06	Total/NA	Solid	8015 NM	
890-3898-7	SW07	Total/NA	Solid	8015 NM	
890-3898-8	SW08	Total/NA	Solid	8015 NM	

#### **HPLC/IC**

#### Leach Batch: 44668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Soluble	Solid	DI Leach	
890-3898-2	SW02	Soluble	Solid	DI Leach	
890-3898-3	SW03	Soluble	Solid	DI Leach	
890-3898-4	SW04	Soluble	Solid	DI Leach	
890-3898-5	SW05	Soluble	Solid	DI Leach	
890-3898-6	SW06	Soluble	Solid	DI Leach	
890-3898-7	SW07	Soluble	Solid	DI Leach	
890-3898-8	SW08	Soluble	Solid	DI Leach	
MB 880-44668/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44668/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44668/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3898-1 MS	SW01	Soluble	Solid	DI Leach	

## **QC Association Summary**

 Client: Ensolum
 Job ID: 890-3898-1

 Project/Site: VGEU 30-01
 SDG: 03D2057005

**HPLC/IC** (Continued)

Leach Batch: 44668 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1 MSD	SW01	Soluble	Solid	DI Leach	

Analysis Batch: 44724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3898-1	SW01	Soluble	Solid	300.0	44668
890-3898-2	SW02	Soluble	Solid	300.0	44668
890-3898-3	SW03	Soluble	Solid	300.0	44668
890-3898-4	SW04	Soluble	Solid	300.0	44668
890-3898-5	SW05	Soluble	Solid	300.0	44668
890-3898-6	SW06	Soluble	Solid	300.0	44668
890-3898-7	SW07	Soluble	Solid	300.0	44668
890-3898-8	SW08	Soluble	Solid	300.0	44668
MB 880-44668/1-A	Method Blank	Soluble	Solid	300.0	44668
LCS 880-44668/2-A	Lab Control Sample	Soluble	Solid	300.0	44668
LCSD 880-44668/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44668
890-3898-1 MS	SW01	Soluble	Solid	300.0	44668
890-3898-1 MSD	SW01	Soluble	Solid	300.0	44668

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Lab Sample ID: 890-3898-1

Client Sample ID: SW01 Date Collected: 01/18/23 09:40 Date Received: 01/19/23 11:42

**Matrix: Solid** 

Job ID: 890-3898-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44625	01/24/23 12:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44889	01/27/23 20:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45047	01/30/23 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			45391	02/03/23 11:49	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	45202	02/01/23 12:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45222	02/02/23 21:44	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44668	01/24/23 15:28	KS	EET MID
Soluble	Analysis	300.0		10			44724	01/26/23 07:17	CH	EET MID

**Client Sample ID: SW02** Lab Sample ID: 890-3898-2 Date Collected: 01/18/23 09:45 **Matrix: Solid** 

Date Received: 01/19/23 11:42

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 Total/NA 4.98 g 5 mL 44625 01/24/23 12:09 MNR EET MID Total/NA 8021B 5 mL 01/27/23 20:37 **EET MID** Analysis 1 5 mL 44889 MNR Total/NA Total BTEX 45047 01/30/23 12:32 Analysis 1 SM **EET MID** Total/NA Analysis 8015 NM 45391 02/03/23 11:49 ΑJ **EET MID** Total/NA 45202 02/01/23 12:51 Prep 8015NM Prep 10.02 g 10 mL DM EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 45222 02/02/23 22:45 ΑJ **EET MID** Soluble 44668 01/24/23 15:28 KS Leach DI Leach 4.96 g 50 mL EET MID Soluble Analysis 300.0 5 44724 01/26/23 07:35 СН **EET MID** 

Lab Sample ID: 890-3898-3 **Client Sample ID: SW03** Date Collected: 01/18/23 09:50 Matrix: Solid

Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035		·	4.97 g	5 mL	44625	01/24/23 12:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44889	01/27/23 21:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45047	01/30/23 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			45391	02/03/23 11:49	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45202	02/01/23 12:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45222	02/02/23 23:04	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44668	01/24/23 15:28	KS	EET MID
Soluble	Analysis	300.0		5			44724	01/26/23 07:41	CH	EET MID

**Client Sample ID: SW04** Lab Sample ID: 890-3898-4 Date Collected: 01/18/23 09:55 Matrix: Solid

Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44625	01/24/23 12:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44889	01/27/23 21:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45047	01/30/23 12:32	SM	EET MID

Job ID: 890-3898-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: 03D2057005

Client Sample ID: SW04 Lab Sample ID: 890-3898-4

Date Collected: 01/18/23 09:55 Matrix: Solid Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			45391	02/03/23 11:49	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45202	02/01/23 12:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45222	02/02/23 23:25	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	44668	01/24/23 15:28	KS	EET MID
Soluble	Analysis	300.0		1			44724	01/26/23 08:00	CH	EET MID

**Client Sample ID: SW05** Lab Sample ID: 890-3898-5

Date Collected: 01/18/23 10:00 **Matrix: Solid** Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	44625	01/24/23 12:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44889	01/27/23 21:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45047	01/30/23 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			45391	02/03/23 11:49	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45202	02/01/23 12:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45222	02/02/23 23:45	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	44668	01/24/23 15:28	KS	EET MID
Soluble	Analysis	300.0		1			44724	01/26/23 08:06	CH	EET MID

**Client Sample ID: SW06** Lab Sample ID: 890-3898-6

Date Collected: 01/18/23 10:05 **Matrix: Solid** Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	44625	01/24/23 12:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44889	01/27/23 22:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45047	01/30/23 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			45391	02/03/23 11:49	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45202	02/01/23 12:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45222	02/03/23 00:04	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44668	01/24/23 15:28	KS	EET MID
Soluble	Analysis	300.0		5			44724	01/26/23 08:12	CH	EET MID

**Client Sample ID: SW07** Lab Sample ID: 890-3898-7

Date Collected: 01/18/23 10:10 **Matrix: Solid** Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44625	01/24/23 12:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44889	01/27/23 22:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45047	01/30/23 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			45391	02/03/23 11:49	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45202	02/01/23 12:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45222	02/03/23 00:25	AJ	EET MID

Client: Ensolum

Job ID: 890-3898-1 Project/Site: VGEU 30-01 SDG: 03D2057005

**Client Sample ID: SW07** Lab Sample ID: 890-3898-7

Date Collected: 01/18/23 10:10 Matrix: Solid Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	44668	01/24/23 15:28	KS	EET MID
Soluble	Analysis	300.0		5			44724	01/26/23 08:18	CH	EET MID

**Client Sample ID: SW08** Lab Sample ID: 890-3898-8

Date Collected: 01/18/23 10:15 **Matrix: Solid** 

Date Received: 01/19/23 11:42

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	44625	01/24/23 12:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44889	01/27/23 23:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45047	01/30/23 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			45391	02/03/23 11:49	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45202	02/01/23 12:51	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45222	02/03/23 00:45	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	44668	01/24/23 15:28	KS	EET MID
Soluble	Analysis	300.0		10			44724	01/26/23 08:24	CH	EET MID

Laboratory References:

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

## **Accreditation/Certification Summary**

 Client: Ensolum
 Job ID: 890-3898-1

 Project/Site: VGEU 30-01
 SDG: 03D2057005

**Laboratory: Eurofins Midland** 

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas		ELAP	T104704400-22-25	06-30-23
The following analytes the agency does not of		ut the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for whic
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
I				

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#### **Method Summary**

Client: Ensolum

Project/Site: VGEU 30-01 SDG: 03D2057005

Job ID: 890-3898-1

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**

Client: Ensolum

Project/Site: VGEU 30-01

Job ID: 890-3898-1 SDG: 03D2057005

	ODO. 00D2007000	
l		

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3898-1	SW01	Solid	01/18/23 09:40	01/19/23 11:42	0-4'
890-3898-2	SW02	Solid	01/18/23 09:45	01/19/23 11:42	0-4'
890-3898-3	SW03	Solid	01/18/23 09:50	01/19/23 11:42	0-4'
890-3898-4	SW04	Solid	01/18/23 09:55	01/19/23 11:42	0-4'
890-3898-5	SW05	Solid	01/18/23 10:00	01/19/23 11:42	0-4'
890-3898-6	SW06	Solid	01/18/23 10:05	01/19/23 11:42	0-4'
890-3898-7	SW07	Solid	01/18/23 10:10	01/19/23 11:42	0-4'
890-3898-8	SW08	Solid	01/18/23 10:15	01/19/23 11:42	0-4'

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# Chain of Custody

	Xenco	Xenco	ő	Midland, EL Pas Hobbs,	TX (432) / o, TX (915) NM (575)	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3339 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	ubbock, TX	Moland, IX (432) 704-5440, San Antonio, IX (210) 509-333 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550. Carlsbad, NM (575) 988-3199	99		www.xenco.com	o.com Page	of
Project Manager:	Kalei Jennings			Bill to: (if different)	Kal	Kalei Jennings					Work C	Work Order Comments	S
	Ensolum			Company Name:	Ens	Ensolum				Program:	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐	] Brownfields [] I	RRC Superfund
	3122 National Parks Hwy	ks Hwy	,	Address:	312	3122 National Parks Hwy	Parks Hwy	,		State of Project:	roject:		
le ZIP:	Carlsbad, NM 88220	20	0	City, State ZIP:	Car	Carlsbad, NM 88220	38220			Reporting	Reporting: Level II 🗌 Level III 🔲 PST/UST 📗 TRRP 📗	PST/UST [] 1	TRRP   Level IV
	303-887-2946		Email: (	Garrett.Green@ExxonMobil.com	0Exxon(√	lobil.com				Deliverables: EDD	es: EDD	ADaPT C	Other:
Project Name:	VGEU 30-01	30-01	Turn /	Turn Around				ANA	ANALYSIS REQUEST	UEST		Pres	Preservative Codes
Project Number:	03D2057005	57005	✓ Routine	3	Pres. Code							None: NO	DI Water: H <sub>2</sub> O
Project Location:			Due Date:									Cool: Cool	MeOH: Me
Sampler's Name:	Connor Whitman	Vhitman	TAT starts the	TAT starts the day received by				_	_	_		HCL: HC	HNO3: HN
PO#:			the lab, if rece	the lab, if received by 4:30pm	rs							H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub>	NaOH: Na
SAMPLE RECEIPT	Temp Blank:	k: Yes No	Wet ice:	Tes No	nete 0)							H₃PO₄: HP	J
Samples Received Intact:	,	Thermometer ID:	r ID:	TAN DOX								NaHSO4: NABIS	NABIS
Cooler Custody Seals:	Yes No/	N/A Correction Factor:	actor:	0.0			n			FIRST		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	NaSO <sub>3</sub>
Sample Custody Seals:	: Yes No		Reading:	5.6	(EF		1	oad-soad Chain of C	nain of Cust	ustody		Zn Acetate	Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	mperature:	4.3	IDES	15)	1021	_	_	_	-	NaOH+As	NaOH+Ascorbic Acid: SAPC
Sample Identification		Matrix Date Sampled	Time	Depth Grab/	Cont of	TPH (80	BTEX (					Sam	Sample Comments
SWOI		5 1/18/23	00.0	0-4, 0	-							Incident ID:	D
5402		- 1	56.6	-	-							NAPP2200643457	00643457
LONS			0.5.6		_							Cost Center:	ter:
horns			55.6		1								
Suva 8			10:00		/ /							AFE:	
90MS			10.05		_								
2007			16.10		/								
8008			10:15	-	-	-	T						
						くまな	4						
						1	/_	_					
Total 200.7 / 6010	10 200.8 / 6020:		8RCRA 13PPM	Texas 11	Al Sb As	Ва Ве	B Cd Ca	Cr Co	Cu Fe Pb I	Pb Mg Mn Mo	o Ni K Se Ag S	SiO <sub>2</sub> Na Sr Ti Sn	Sn ∪ V Zn
Circle Method(s) and Metal(s) to be analyzed	d Metal(s) to be a	nalyzed	TCLP / SPI	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	RA Sb	As Ba B	e Cd Cr	Co Cu P	o Mn Mo	Ni Se Ag	TI U Hg:	TI U Hg: 1631 / 245.1 / 7470	470 / 7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of services. 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	ocument and relinquish	ment of samples const	itutes a valid purch	hase order from clie any responsibility for	nt company or any losse	to Eurofins )	enco, its aff	iliates and sub	contractors. It	assigns stand	tard terms and conditions the conditions the conditions the conditions the conditions the conditions to the conditions the con	ns trol	
Relinquished by: (Signature)   Received by: (Signature)   Date/Time   Relinquished by: (Signature)   Received by: (Signature)	(Signature)	Receive	d bv: (Signatu	re)	Dat	Date/Time	R	linguished	Relinguished by: (Signature)	ure)	Received by: (Signature)	ignature)	Date/Time
relinquistred by. (originature)	(Signature)	Vecel/e	received by, (signature)	<u>a</u>	0	1	- 16	III quisired	by. (Digital)	(0,0)	1,000,000 07. 10	'S'include	1

Revised Date: 08/25/2020 Rev. 2020.2

#### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-3898-1 SDG Number: 03D2057005

Login Number: 3898 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

#### **Login Sample Receipt Checklist**

 Client: Ensolum
 Job Number: 890-3898-1

 SDG Number: 03D2057005

List Source: Eurofins Midland List Creation: 01/20/23 10:42 AM

List Number: 2 Creator: Rodriguez, Leticia

Login Number: 3898

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

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<6mm (1/4").

**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Kalei Jennings

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 2/13/2023 10:16:57 AM Revision 2

# **JOB DESCRIPTION**

VGEU 30-01 SDG NUMBER Lea County NM

# **JOB NUMBER**

890-3958-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

# **Eurofins Carlsbad**

#### **Job Notes**

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

# Authorization

Generated 2/13/2023 10:16:57 AM

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

Revision 2

Client: Ensolum
Project/Site: VGEU 30-01
Laboratory Job ID: 890-3958-1
SDG: Lea County NM

# **Table of Contents**

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#### **Definitions/Glossary**

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01

SDG: Lea County NM

**Qualifiers** 

**GC VOA** Qualifier **Qualifier Description** 

LCS and/or LCSD is outside acceptance limits, low biased. S1-Surrogate recovery exceeds control limits, low biased. U Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**Glossary** 

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

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

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

**DER** Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

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

Decision Level Concentration (Radiochemistry) DLC

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

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

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

NC Not Calculated

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

Negative / Absent NEG POS Positive / Present

PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC Quality Control

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

**TNTC** Too Numerous To Count

#### Case Narrative

Client: Ensolum

Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

Job ID: 890-3958-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-3958-1

#### REVISION

The report being provided is a revision of the original report sent on 2/9/2023. The report (revision 2) is being revised due to Per client email, samples 027-033 need to be on separate report.

Report revision history

The report being provided is a revision of the original report sent on 2/9/2023. The report (revision 2) is being revised due to Per client email, samples 027-033 need to be on separate report.

Revision 1 - 2/9/2023 - Reason - Per client email, requesting sample ID changes.

#### Receipt

The samples were received on 1/25/2023 3:32 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

#### Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS27 (890-3958-1), FS28 (890-3958-2), FS29 (890-3958-3), FS30 (890-3958-4), FS31 (890-3958-5), FS32 (890-3958-6), FS33 (890-3958-7), FS34 (890-3958-8), FS35 (890-3958-9), FS36 (890-3958-10), FS37 (890-3958-11), FS38 (890-3958-12), FS39 (890-3958-13), FS40 (890-3958-14), FS41 (890-3958-15), FS42 (890-3958-16), FS43 (890-3958-17), FS44 (890-3958-18), FS45 (890-3958-19), FS46 (890-3958-20), FS47 (890-3958-21), FS48 (890-3958-22), FS49 (890-3958-23), FS50 (890-3958-24), FS51 (890-3958-25), FS52 (890-3958-26), SW09 (890-3958-27), SW10 (890-3958-28), SW11 (890-3958-29), SW12 (890-3958-30), SW13 (890-3958-31), SW14 (890-3958-32) and SW15 (890-3958-33).

#### **GC VOA**

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW10 (890-3958-28), SW11 (890-3958-29), SW12 (890-3958-30) and SW13 (890-3958-31). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

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

#### HPLC/IC

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

**Eurofins Carlsbad** 2/13/2023 (Rev. 2) Job ID: 890-3958-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: Lea County NM

Lab Sample ID: 890-3958-27 **Client Sample ID: SW09 Matrix: Solid** 

Date Collected: 01/25/23 12:30 Date Received: 01/25/23 15:32

Sample Depth: 0-4'								
Method: SW846 8021B - Vo	_	•		11!4		Duamanad	A walawa d	Dil Far
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:18	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:18	1
Ethylbenzene	<0.00199	U *-	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:18	1
m-Xylene & p-Xylene	<0.00398	U *-	0.00398	mg/Kg		02/03/23 12:56	02/05/23 20:18	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:18	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/03/23 12:56	02/05/23 20:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			02/03/23 12:56	02/05/23 20:18	1
1,4-Difluorobenzene (Surr)	94		70 - 130			02/03/23 12:56	02/05/23 20:18	1

Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398	ma/Ka			02/06/23 12:58	1	

Method: SW846 8015 NM - Diesel	Range (	Organics (D	RO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/09/23 09:20	1

Method: SW846 8015B NM - D	iesel Range Organics (DRO) (GC)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 13:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 13:53	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 13:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			02/06/23 16:38	02/08/23 13:53	1

Method: EPA 300.0 - Anions, I	on Chromatography -	Soluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	213	4.95	mg/Kg			02/02/23 18:29	1

70 - 130

**Client Sample ID: SW10** Lab Sample ID: 890-3958-28

Date Collected: 01/25/23 12:35 Date Received: 01/25/23 15:32

Sample Depth: 0-4'

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:39	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:39	1
Ethylbenzene	<0.00199	U *-	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:39	1
m-Xylene & p-Xylene	<0.00398	U *-	0.00398	mg/Kg		02/03/23 12:56	02/05/23 20:39	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 20:39	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/03/23 12:56	02/05/23 20:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	40	S1-	70 - 130			02/03/23 12:56	02/05/23 20:39	1

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02/06/23 16:38 02/08/23 13:53

**Matrix: Solid** 

**Matrix: Solid** 

Lab Sample ID: 890-3958-28

Client: Ensolum Job ID: 890-3958-1
Project/Site: VGEU 30-01 SDG: Lea County NM

Client Sample ID: SW10

Date Collected: 01/25/23 12:35 Date Received: 01/25/23 15:32

Sample Depth: 0-4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130	02/03/23 12:56	02/05/23 20:39	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/06/23 12:58	1

#### Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result Q	<b>Qualifier</b>	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	) ;	50.0	mg/Kg			02/09/23 09:20	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/06/23 16:38	02/08/23 14:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/06/23 16:38	02/08/23 14:14	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/06/23 16:38	02/08/23 14:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	02/06/23 16:38	02/08/23 14:14	1
o-Terphenyl	107		70 - 130	02/06/23 16:38	02/08/23 14:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	215		5.02	mg/Kg			02/02/23 18:34	1

Client Sample ID: SW11

Date Collected: 01/25/23 12:40

Lab Sample ID: 890-3958-29

Matrix: Solid

Date Collected: 01/25/23 12:40 Date Received: 01/25/23 15:32

Sample Depth: 0-4'

Method: SW846 8021B - Volatile Organic Compounds (	Method:	: SW846 8021B	- Volatile Organic	Compounds (GC)
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			( /				
Analyte	Result	Qualifier	RL	Unit	D Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	02/03/23 12:56	02/05/23 21:00	1
Toluene	<0.00200	U	0.00200	mg/Kg	02/03/23 12:56	02/05/23 21:00	1
Ethylbenzene	<0.00200	U *-	0.00200	mg/Kg	02/03/23 12:56	02/05/23 21:00	1
m-Xylene & p-Xylene	<0.00399	U *-	0.00399	mg/Kg	02/03/23 12:56	02/05/23 21:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	02/03/23 12:56	02/05/23 21:00	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg	02/03/23 12:56	02/05/23 21:00	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130		02/03/23 12:56	02/05/23 21:00	1
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130		02/03/23 12:56	02/05/23 21:00	1

Method: TA	I SOP Total RTFX.	- Total RTFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg	_		02/06/23 12:58	1

Analyte	Result Q	ualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 U		49.9	mg/Kg			02/09/23 09:20	1

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4.0

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

Da Date Received: 01/25/23 15:32

Sample Depth: 0-4'

Client Sample ID: SW11	Lab Sample ID: 890-3958-29
Date Collected: 01/25/23 12:40	Matrix: Solid

Method: SW846 8015B NM - I	Diesel Range	<b>Organics</b>	(DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 14:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 14:36	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 14:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130			02/06/23 16:38	02/08/23 14:36	1
o-Terphenyl	102		70 - 130			02/06/23 16:38	02/08/23 14:36	1
Method: EPA 300.0 - Anions,	Ion Chromat	tography -	Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	227		4.99	mg/Kg			02/02/23 18:39	1

Lab Sample ID: 890-3958-30 **Client Sample ID: SW12 Matrix: Solid** 

Date Collected: 01/25/23 12:45 Date Received: 01/25/23 15:32

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:56	02/05/23 21:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:56	02/05/23 21:21	1
Ethylbenzene	< 0.00200	U *-	0.00200	mg/Kg		02/03/23 12:56	02/05/23 21:21	1
m-Xylene & p-Xylene	< 0.00401	U *-	0.00401	mg/Kg		02/03/23 12:56	02/05/23 21:21	1
o-Xylene	< 0.00200	U	0.00200	mg/Kg		02/03/23 12:56	02/05/23 21:21	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/03/23 12:56	02/05/23 21:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			02/03/23 12:56	02/05/23 21:21	1
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130			02/03/23 12:56	02/05/23 21:21	1
: Method: SW846 8015 NM - Die	esel Range (	Organics (	DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9		49.9	<u></u>	_ =		02/09/23 09:20	1
Method: SW846 8015B NM - D Analyte	_	Organics Qualifier	(DRO) (GC)	Unit	D	Prepared	Analyzed	Dil Fac
			49.9			02/06/23 16:38	02/08/23 14:58	1
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 14:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 14:58	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 14:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Surroyale	/orvecovery	Qualifiei	Liiiii			Frepareu	Allalyzeu	Diriac

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02/06/23 16:38 02/08/23 14:58

70 - 130

111

o-Terphenyl

Lab Sample ID: 890-3958-30

Job ID: 890-3958-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: Lea County NM

**Client Sample ID: SW12** 

Sample Depth: 0-4'

	·
Date Collected: 01/25/23 12:45	Matrix: Solid
Nate Received: 01/25/23 15:32	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride 5.05 02/02/23 18:53 236 mg/Kg

**Client Sample ID: SW13** Lab Sample ID: 890-3958-31

Date Collected: 01/25/23 12:50 Date Received: 01/25/23 15:32

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 21:42	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 21:42	1
Ethylbenzene	< 0.00199	U *-	0.00199	mg/Kg		02/03/23 12:56	02/05/23 21:42	1
m-Xylene & p-Xylene	<0.00398	U *-	0.00398	mg/Kg		02/03/23 12:56	02/05/23 21:42	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 21:42	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/03/23 12:56	02/05/23 21:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			02/03/23 12:56	02/05/23 21:42	1
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130			02/03/23 12:56	02/05/23 21:42	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg	_		02/06/23 12:58	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)										
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
	Total TPH	<49.9	U	49.9	mg/Kg			02/09/23 09:20	1	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 16:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 16:34	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 16:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130			02/06/23 16:38	02/08/23 16:34	1
o-Terphenyl	101		70 - 130			02/06/23 16:38	02/08/23 16:34	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result Q	ualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	227		4.96	mg/Kg			02/02/23 18:57	1	

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**Matrix: Solid** 

**Matrix: Solid** 

Lab Sample ID: 890-3958-32

02/06/23 16:38 02/08/23 16:56

02/06/23 16:38 02/08/23 16:56

Analyzed

Dil Fac

**Matrix: Solid** 

Job ID: 890-3958-1

Client: Ensolum Project/Site: VGEU 30-01 SDG: Lea County NM

**Client Sample ID: SW14** 

Date Collected: 01/25/23 12:55 Date Received: 01/25/23 15:32

Sample Depth: 0-4'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 22:03	1
Toluene	< 0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 22:03	1
Ethylbenzene	< 0.00199	U *-	0.00199	mg/Kg		02/03/23 12:56	02/05/23 22:03	1
m-Xylene & p-Xylene	<0.00398	U *-	0.00398	mg/Kg		02/03/23 12:56	02/05/23 22:03	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		02/03/23 12:56	02/05/23 22:03	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/03/23 12:56	02/05/23 22:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			02/03/23 12:56	02/05/23 22:03	1
1,4-Difluorobenzene (Surr)	80		70 - 130			02/03/23 12:56	02/05/23 22:03	1
Total BTEX  Method: SW846 8015 NM - Die	<0.00398 esel Range (		0.00398 DRO) (GC)	mg/Kg			02/06/23 12:58	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/09/23 09:20	1
Method: SW846 8015B NM - D	iesel Range	Organics	(DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 16:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 16:56	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/06/23 16:38	02/08/23 16:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Chloride 225 5.02 mg/Kg 02/02/23 19:11 **Client Sample ID: SW15** Lab Sample ID: 890-3958-33

RL

Unit

D

Prepared

70 - 130

70 - 130

103

108

Result Qualifier

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Date Collected: 01/25/23 13:00 Date Received: 01/25/23 15:32

Sample Depth: 0-4'

1-Chlorooctane

o-Terphenyl

Analyte

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 14:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 14:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 14:36	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/05/23 10:08	02/05/23 14:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 14:36	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/05/23 10:08	02/05/23 14:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			02/05/23 10:08	02/05/23 14:36	1

Date Collected: 01/25/23 13:00

## **Client Sample Results**

Client: Ensolum Job ID: 890-3958-1
Project/Site: VGEU 30-01 SDG: Lea County NM

Client Sample ID: SW15

Result Qualifier

226

Lab Sample ID: 890-3958-33

Analyzed

02/02/23 19:16

Dil Fac

Prepared

Matrix: Solid

Date Received: 01/25/23 15:32 Sample Depth: 0-4'

Analyte

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100		70 - 130			02/05/23 10:08	02/05/23 14:36	1
Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/06/23 12:09	1
Method: SW846 8015 NM - Di	esel Range (	Organics (	DRO) (GC)					
Analyte	_	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	П	50.0	mg/Kg			02/09/23 09:20	1
				9/. 19				
Method: SW846 8015B NM - E	Diesel Range	organics	(DRO) (GC)		n	Propared	Analyzed	Dil Fac
Method: SW846 8015B NM - D Analyte Gasoline Range Organics	Diesel Range	Organics Qualifier		Unit mg/Kg	<u>D</u>	Prepared 02/06/23 16:38	Analyzed 02/08/23 17:18	Dil Fac
Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Diesel Range Result	Organics Qualifier	(DRO) (GC)	Unit	<u>D</u>	02/06/23 16:38		Dil Fac
Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Diesel Range Result <50.0	Organics Qualifier U	(DRO) (GC) RL 50.0	Unit mg/Kg	<u>D</u>	02/06/23 16:38 02/06/23 16:38	02/08/23 17:18	Dil Fac 1 1
Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Diesel Range Result <50.0	Organics Qualifier U U	(DRO) (GC) RL 50.0	Unit mg/Kg mg/Kg	<u>D</u>	02/06/23 16:38 02/06/23 16:38	02/08/23 17:18 02/08/23 17:18	Dil Fac  1  1  1  Dil Fac
Method: SW846 8015B NM - E Analyte Gasoline Range Organics (GRO)-C6-C10	Result   <50.0   <50.0	Organics Qualifier U U	(DRO) (GC) RL 50.0 50.0	Unit mg/Kg mg/Kg	<u> </u>	02/06/23 16:38 02/06/23 16:38 02/06/23 16:38	02/08/23 17:18 02/08/23 17:18 02/08/23 17:18	1 1

4.95

Unit

mg/Kg

#### **Surrogate Summary**

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

			Percent Surrogate Recovery (Acceptance Limits)						
		BFB1	DFBZ1						
Lab Sample ID	Client Sample ID	(70-130)	(70-130)						
890-3958-27	SW09	119	94						
890-3958-28	SW10	40 S1-	105						
890-3958-29	SW11	79	67 S1-						
890-3958-30	SW12	105	69 S1-						
890-3958-31	SW13	111	69 S1-						
890-3958-32	SW14	116	80						
890-3958-33	SW15	95	100						

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)							
		1CO1	ОТРН1						
Lab Sample ID	Client Sample ID	(70-130)	70-130)						
890-3958-27	SW09	85	92						
890-3958-28	SW10	101	107						
890-3958-29	SW11	98	102						
890-3958-30	SW12	107	111						
890-3958-31	SW13	88	101						
890-3958-32	SW14	103	108						
890-3958-33	SW15	101	103						

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44921/5-A

**Matrix: Solid** 

**Analysis Batch: 45310** 

**Prep Type: Total/NA** 

Prep Batch: 44921

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/27/23 12:20	02/03/23 23:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/27/23 12:20	02/03/23 23:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/27/23 12:20	02/03/23 23:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/27/23 12:20	02/03/23 23:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/27/23 12:20	02/03/23 23:11	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/27/23 12:20	02/03/23 23:11	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83	70 - 130	01/27/23 12:20	02/03/23 23:11	1
1,4-Difluorobenzene (Surr)	90	70 - 130	01/27/23 12:20	02/03/23 23:11	1

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

Prep Batch: 45395

Lab Sample ID: MB 880-45395/5-A

Matrix: Solid

**Analysis Batch: 45310** 

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:53	02/04/23 10:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:53	02/04/23 10:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:53	02/04/23 10:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/03/23 12:53	02/04/23 10:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:53	02/04/23 10:59	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		02/03/23 12:53	02/04/23 10:59	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	54	S1-	70 - 130	02/03/23 12:53	02/04/23 10:59	1
1,4-Difluorobenzene (Surr)	78		70 - 130	02/03/23 12:53	02/04/23 10:59	1

Lab Sample ID: LCS 880-45395/1-A

**Matrix: Solid** 

**Analysis Batch: 45310** 

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

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

Prep Type: Total/NA Prep Batch: 45395

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08286		mg/Kg		83	70 - 130	
Toluene	0.100	0.07417		mg/Kg		74	70 - 130	
Ethylbenzene	0.100	0.06654	*-	mg/Kg		67	70 - 130	
m-Xylene & p-Xylene	0.200	0.1351	*_	mg/Kg		68	70 - 130	
o-Xylene	0.100	0.07078		mg/Kg		71	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	87	70 - 130
1.4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: LCSD 880-45395/2-A

Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 45310							Prep E	Batch: 4	<b>45395</b>
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09420		mg/Kg		94	70 - 130	13	35

Client: Ensolum Project/Site: VGEU 30-01

Job ID: 890-3958-1 SDG: Lea County NM

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

Lab Sample ID: LCSD 880-45395/2-A

**Matrix: Solid** 

**Analysis Batch: 45310** 

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

Prep Type: Total/NA Prep Batch: 45395

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08236		mg/Kg		82	70 - 130	10	35
Ethylbenzene	0.100	0.07400		mg/Kg		74	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.1494		mg/Kg		75	70 - 130	10	35
o-Xylene	0.100	0.07800		mg/Kg		78	70 - 130	10	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 890-3958-1 MS Client Sample ID: FS27 **Matrix: Solid** 

Prep Type: Total/NA **Analysis Batch: 45310** Prep Batch: 45395

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Unit Analyte Added D %Rec Limits Benzene <0.00201 U F1 0.100 0.08908 89 70 - 130 mg/Kg Toluene <0.00201 U 0.100 0.08107 mg/Kg 81 70 - 130 Ethylbenzene <0.00201 U \*-0.100 0.07542 mg/Kg 75 70 - 130 m-Xylene & p-Xylene <0.00402 U \*- F1 0.200 69 0.1387 F1 mg/Kg 70 - 130 o-Xylene <0.00201 U 0.100 0.08245 mg/Kg 82 70 - 130

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 - 130
1,4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: 890-3958-1 MSD **Client Sample ID: FS27** 

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

**Analysis Batch: 45310** Prep Batch: 45395

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0990	0.06479	F1	mg/Kg		65	70 - 130	32	35
Toluene	<0.00201	U	0.0990	0.07195		mg/Kg		73	70 - 130	12	35
Ethylbenzene	< 0.00201	U *-	0.0990	0.07842		mg/Kg		79	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U *- F1	0.198	0.1436		mg/Kg		73	70 - 130	3	35
o-Xylene	< 0.00201	U	0.0990	0.08516		mg/Kg		86	70 - 130	3	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	111	70 - 130
1,4-Difluorobenzene (Surr)	92	70 - 130

Lab Sample ID: MB 880-45396/5-A

**Matrix: Solid** 

**Analysis Batch: 45523** 

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

Prep Batch: 45396

	MB	MB					•	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:56	02/05/23 14:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:56	02/05/23 14:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:56	02/05/23 14:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/03/23 12:56	02/05/23 14:00	1

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01

SDG: Lea County NM

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

Lab Sample ID: MB 880-45396/5-A **Matrix: Solid** 

**Analysis Batch: 45523** 

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 45396

	-	MB	MB						
Δ.	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
0	p-Xylene	<0.00200	U	0.00200	mg/Kg		02/03/23 12:56	02/05/23 14:00	1
Х	Kylenes, Total	<0.00400	U	0.00400	mg/Kg		02/03/23 12:56	02/05/23 14:00	1

MB MB

Surrogate		Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	02/03/23 12:56	02/05/23 14:00	1
1,4-Difluorobenzene (Surr)	91		70 - 130	02/03/23 12:56	02/05/23 14:00	1

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 880-45396/1-A **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 45523** 

Prep Batch: 45396

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09252		mg/Kg		93	70 - 130	
Toluene	0.100	0.09025		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.08293		mg/Kg		83	70 - 130	
m-Xylene & p-Xylene	0.200	0.1648		mg/Kg		82	70 - 130	
o-Xylene	0.100	0.08589		mg/Kg		86	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	107	70 - 130
1,4-Difluorobenzene (Surr)	119	70 - 130

Lab Sample ID: LCSD 880-45396/2-A

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

Prep Type: Total/NA Prep Batch: 45396

**Analysis Batch: 45523** Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Benzene 0.100 0.07424 74 70 - 130 mg/Kg 22 35 Toluene 0.100 0.07334 mg/Kg 73 70 - 130 21 35 Ethylbenzene 0.100 0.06857 \*mg/Kg 70 - 130 35 0.200 0.1382 \*m-Xylene & p-Xylene mg/Kg 69 70 - 130 18 35 o-Xylene 0.100 0.07271 mg/Kg 73 70 - 130 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 880-24111-A-1-E MS **Client Sample ID: Matrix Spike** 

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 45523** 

**Prep Type: Total/NA** Prep Batch: 45396

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1	0.0996	0.05612	F1	mg/Kg		56	70 - 130	
Toluene	<0.00200	U F1	0.0996	0.05983	F1	mg/Kg		60	70 - 130	
Ethylbenzene	<0.00200	U *- F1	0.0996	0.06200	F1	mg/Kg		62	70 - 130	
m-Xylene & p-Xylene	<0.00401	U *- F1	0.199	0.1270	F1	mg/Kg		64	70 - 130	
o-Xylene	<0.00200	U F1	0.0996	0.06641	F1	mg/Kg		67	70 - 130	

Client: Ensolum Project/Site: VGEU 30-01

Job ID: 890-3958-1 SDG: Lea County NM

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

Lab Sample ID: 880-24111-A-1-E MS

**Matrix: Solid** 

**Analysis Batch: 45523** 

Client Sample ID: Matrix Spike

**Prep Type: Total/NA** 

Prep Batch: 45396

MS MS %Recovery Qualifier Surrogate Limits 4-Bromofluorobenzene (Surr) 104 70 - 130 1,4-Difluorobenzene (Surr) 95 70 - 130

Lab Sample ID: 880-24111-A-1-F MSD

**Matrix: Solid** 

**Analysis Batch: 45523** 

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Batch: 45396

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F1	0.0990	0.07330		mg/Kg		74	70 - 130	27	35
Toluene	<0.00200	U F1	0.0990	0.06561	F1	mg/Kg		66	70 - 130	9	35
Ethylbenzene	<0.00200	U *- F1	0.0990	0.05852	F1	mg/Kg		59	70 - 130	6	35
m-Xylene & p-Xylene	<0.00401	U *- F1	0.198	0.09570	F1	mg/Kg		48	70 - 130	28	35
o-Xylene	<0.00200	U F1	0.0990	0.06124	F1	mg/Kg		62	70 - 130	8	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	91	70 - 130
1,4-Difluorobenzene (Surr)	108	70 - 130

Lab Sample ID: MB 880-45527/5-A

**Matrix: Solid** 

**Analysis Batch: 45526** 

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

Prep Batch: 45527

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 13:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 13:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 13:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/05/23 10:08	02/05/23 13:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/05/23 10:08	02/05/23 13:43	1
Xvlenes Total	< 0.00400	U	0.00400	ma/Ka		02/05/23 10:08	02/05/23 13:43	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	64	S1-	70 - 130	02/05/23 10:08	02/05/23 13:43	1
1.4-Difluorobenzene (Surr)	95		70 - 130	02/05/23 10:08	02/05/23 13:43	1

Lab Sample ID: LCS 880-45527/1-A

Released to Imaging: 3/13/2023 4:02:23 PM

**Matrix: Solid** 

**Analysis Batch: 45526** 

**Client Sample ID: Lab Control Sample** 

Prep Batch: 45527

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08150		mg/Kg		82	70 - 130	
Toluene	0.100	0.07937		mg/Kg		79	70 - 130	
Ethylbenzene	0.100	0.07973		mg/Kg		80	70 - 130	
m-Xylene & p-Xylene	0.200	0.1583		mg/Kg		79	70 - 130	
o-Xylene	0.100	0.08259		mg/Kg		83	70 - 130	

LCS LCS

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

**Eurofins Carlsbad** 

Prep Type: Total/NA

Job ID: 890-3958-1 Client: Ensolum Project/Site: VGEU 30-01 SDG: Lea County NM

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

Lab Sample ID: LCS 880-45527/1-A

**Matrix: Solid** 

**Analysis Batch: 45526** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Prep Batch: 45527

LCS LCS

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

Lab Sample ID: LCSD 880-45527/2-A

**Matrix: Solid** 

**Analysis Batch: 45526** 

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

**Prep Type: Total/NA** 

Prep Batch: 45527

RPD
RPD Limi
6 35
7 35
5 35
4 35
3 35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	81	70 - 130
1,4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: 890-3960-A-1-E MS **Client Sample ID: Matrix Spike** 

**Matrix: Solid** 

**Analysis Batch: 45526** 

Prep Type: Total/NA

Prep Batch: 45527

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.100	0.1228		mg/Kg	_	123	70 - 130	
Toluene	<0.00201	U	0.100	0.1122		mg/Kg		112	70 - 130	
Ethylbenzene	<0.00201	U	0.100	0.1024		mg/Kg		102	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2174		mg/Kg		108	70 - 130	
o-Xylene	<0.00201	U	0.100	0.1085		mg/Kg		108	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 890-3960-A-1-F MSD

Matrix: Solid

**Analysis Batch: 45526** 

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

Prep Batch: 45527

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0990	0.09271		mg/Kg		94	70 - 130	28	35
Toluene	<0.00201	U	0.0990	0.08533		mg/Kg		86	70 - 130	27	35
Ethylbenzene	<0.00201	U	0.0990	0.08423		mg/Kg		85	70 - 130	19	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1637		mg/Kg		83	70 - 130	28	35
o-Xylene	<0.00201	U	0.0990	0.08138		mg/Kg		82	70 - 130	29	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	74	70 - 130
1,4-Difluorobenzene (Surr)	95	70 - 130

Client: Ensolum

Job ID: 890-3958-1 SDG: Lea County NM

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

Lab Sample ID: MB 880-45550/5-A

**Matrix: Solid** 

**Analysis Batch: 45543** 

Project/Site: VGEU 30-01

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

Prep Batch: 45550

	1410	1410						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/06/23 08:20	02/06/23 11:34	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/06/23 08:20	02/06/23 11:34	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/06/23 08:20	02/06/23 11:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/06/23 08:20	02/06/23 11:34	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/06/23 08:20	02/06/23 11:34	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/06/23 08:20	02/06/23 11:34	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	65	S1-	70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

**Client Sample ID: Lab Control Sample** 

02/06/23 08:20 02/06/23 11:34 02/06/23 08:20 02/06/23 11:34

Analyzed

Prepared

**Prep Type: Total/NA** Prep Batch: 45550

Prep Type: Total/NA

Prep Batch: 45550

Lab Sample ID: LCS 880-45550/1-A **Matrix: Solid** 

**Analysis Batch: 45543** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1110		mg/Kg		111	70 - 130	
Toluene	0.100	0.1021		mg/Kg		102	70 - 130	
Ethylbenzene	0.100	0.09568		mg/Kg		96	70 - 130	
m-Xylene & p-Xylene	0.200	0.1836		mg/Kg		92	70 - 130	
o-Xylene	0.100	0.09636		mg/Kg		96	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

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

**Matrix: Solid** 

**Analysis Batch: 45543** 

Lab Sample ID: LCSD 880-45550/2-A

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1173		mg/Kg		117	70 - 130	5	35
Toluene	0.100	0.1075		mg/Kg		108	70 - 130	5	35
Ethylbenzene	0.100	0.09954		mg/Kg		100	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1915		mg/Kg		96	70 - 130	4	35
o-Xylene	0.100	0.1010		mg/Kg		101	70 - 130	5	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 890-3958-11 MS

Analysis Batch: 45543										Batch: 45550
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U	0.101	0.1117		mg/Kg		111	70 - 130	
Toluene	<0.00202	U	0.101	0.1017		mg/Kg		101	70 - 130	

**Eurofins Carlsbad** 

Client Sample ID: FS37

1

Dil Fac

#### **QC Sample Results**

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

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

Lab Sample ID: 890-3958-11 MS

**Analysis Batch: 45543** 

**Client Sample ID: FS37 Matrix: Solid Prep Type: Total/NA** Prep Batch: 45550

ı		Sample	Sample	Spike	MS	MS				%Rec	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Ethylbenzene	<0.00202	U	0.101	0.1024		mg/Kg		101	70 - 130	
	m-Xylene & p-Xylene	< 0.00403	U	0.202	0.2003		mg/Kg		99	70 - 130	
	o-Xylene	<0.00202	U	0.101	0.09987		mg/Kg		99	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-3958-11 MSD

Client Sample ID: FS37 **Matrix: Solid** Prep Type: Total/NA Prep Batch: 45550 **Analysis Batch: 45543** 

Sample Sample Spike MSD MSD %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Benzene 0.0990 99 70 - 130 13 35 <0.00202 U 0.09848 mg/Kg Toluene <0.00202 U 0.0990 0.09369 95 70 - 130 35 mg/Kg 87 Ethylbenzene <0.00202 U 0.0990 0.08634 mg/Kg 70 - 130 17 35 m-Xylene & p-Xylene <0.00403 U 0.198 0.1696 mg/Kg 86 70 - 130 17 35 <0.00202 U 0.0990 0.08644 o-Xylene mg/Kg 87 70 - 130 14

MSD MSD

Surrogate	%Recovery Qualified	r Limits
4-Bromofluorobenzene (Surr)	95	70 - 130
1,4-Difluorobenzene (Surr)	103	70 - 130

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

Lab Sample ID: MB 880-45379/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA Prep Batch: 45379 **Analysis Batch: 45479** MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/03/23 11:41	02/05/23 20:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/03/23 11:41	02/05/23 20:47	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/03/23 11:41	02/05/23 20:47	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared A	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	02/03/23 11:41 02/0	05/23 20:47	1
o-Terphenyl	122		70 - 130	02/03/23 11:41 02/0	05/23 20:47	1

Lab Sample ID: LCS 880-45379/2-A

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Matrix: Solid Analysis Batch: 45479								e: Total/NA atch: 45379
_	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	999	956.4		mg/Kg		96	70 - 130	
Diesel Range Organics (Over C10-C28)	999	854.6		mg/Kg		86	70 - 130	

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**Client Sample ID: Lab Control Sample** 

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

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

Lab Sample ID: LCS 880-45379/2-A

Lab Sample ID: LCSD 880-45379/3-A

**Matrix: Solid** 

**Analysis Batch: 45479** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 45379

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 91 70 - 130 o-Terphenyl 99 70 - 130

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

**Prep Type: Total/NA** 

**Matrix: Solid** 

**Analysis Batch: 45479** 

Prep Batch: 45379 LCSD LCSD RPD %Rec Spike Added Result Qualifier Unit %Rec Limits RPD Limit 20

Gasoline Range Organics 999 874.8 mg/Kg 88 70 - 130 9 (GRO)-C6-C10 Diesel Range Organics (Over 999 927.3 mg/Kg 93 70 - 130 8 20

C10-C28)

Analyte

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	91	70 - 130
o-Terphenyl	100	70 - 130

Lab Sample ID: 890-3958-1 MS Client Sample ID: FS27 **Matrix: Solid** 

**Prep Type: Total/NA Analysis Batch: 45479** Prep Batch: 45379 Sample Sample Spike MS MS %Rec

Result Qualifier Added Result Qualifier Limits Analyte Unit D %Rec <50.0 U Gasoline Range Organics 1000 938.6 mg/Kg 92 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 <50.0 U 1031 mg/Kg 101 70 - 130

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 107 o-Terphenyl 112 70 - 130

Lab Sample ID: 890-3958-1 MSD Client Sample ID: FS27 **Prep Type: Total/NA** 

**Matrix: Solid** 

**Analysis Batch: 45479** Prep Batch: 45379 Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits **RPD** Limit Analyte Unit %Rec <50.0 U 998 846.0 83 70 - 130 10 20 Gasoline Range Organics mg/Kg

919.7

mg/Kg

90

70 - 130

998

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

C10-C28) MSD MSD

<50.0 U

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	100		70 - 130

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#### **QC Sample Results**

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

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

MD MD

143 S1+

Lab Sample ID: MB 880-45638/1-A

**Matrix: Solid** 

**Analysis Batch: 45733** 

**Client Sample ID: Method Blank** 

02/06/23 16:38 02/08/23 08:16

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 45638

Prep Batch: 45638

Prep Type: Total/NA

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/06/23 16:38	02/08/23 08:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/06/23 16:38	02/08/23 08:16	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/06/23 16:38	02/08/23 08:16	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	135	S1+	70 - 130			02/06/23 16:38	02/08/23 08:16	1

Lab Sample ID: LCS 880-45638/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA

70 - 130

**Analysis Batch: 45733** 

o-Terphenyl

Spike LCS LCS %Rec Added Result Qualifier Limits Analyte Unit D %Rec 1000 78 70 - 130 Gasoline Range Organics 784.9 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 959.3 mg/Kg 96 70 - 130 C10-C28)

LCS LCS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 112 70 - 130 o-Terphenyl 105 70 - 130

Lab Sample ID: LCSD 880-45638/3-A

**Matrix: Solid** 

Analysis Ratch: 45733

Analysis Batch: 45/33							Prep E	saton: 4	12038
	Spik	e LCSD	LCSD				%Rec		RPD
Analyte	Adde	d Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	100	912.0		mg/Kg		91	70 - 130	15	20
(GRO)-C6-C10									
Diesel Range Organics (Over	100	1038		mg/Kg		104	70 - 130	8	20
C10-C28)									

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 103 o-Terphenyl 113 70 - 130

Lab Sample ID: 890-3958-21 MS Client Sample ID: FS47 Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 45733									Prep E	satch: 45638
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1243		mg/Kg		122	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1090		mg/Kg		109	70 - 130	

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

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

MS MS %Recovery Qualifier

122

122

Lab Sample ID: 890-3958-21 MS Client Sample ID: FS47 **Matrix: Solid** 

Surrogate 1-Chlorooctane

o-Terphenyl

**Analysis Batch: 45733** 

Prep Type: Total/NA

Prep Batch: 45638

Lab Sample ID: 890-3958-21 MSD Client Sample ID: FS47

Limits

70 - 130

70 - 130

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

**Analysis Batch: 45733** Prep Batch: 45638 MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics <49.9 U 997 1127 mg/Kg 111 70 - 130 10 20

(GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 997 1102 mg/Kg 111 70 - 130 20 1

C10-C28)

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45080/1-A **Client Sample ID: Method Blank Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 45283** 

MB MB

Unit Analyte Result Qualifier RL Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U 02/02/23 14:36 mg/Kg

Lab Sample ID: LCS 880-45080/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 45283** 

Spike LCS LCS %Rec Analyte Added Result Qualifier D %Rec Limits Unit 250 104 Chloride 261.1 mg/Kg 90 - 110

Lab Sample ID: LCSD 880-45080/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 45283** 

Spike LCSD LCSD %Rec Added Result Qualifier Limits Analyte Unit D %Rec RPD Limit Chloride 250 262.3 mg/Kg 105 90 - 110 0

Lab Sample ID: 890-3958-1 MS Client Sample ID: FS27 **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 45283** 

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Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 37.6 250 104 90 - 110 297.0 mg/Kg

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**RPD** 

Client: Ensolum Job ID: 890-3958-1 Project/Site: VGEU 30-01 SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3958-1 MSD Client Sample ID: FS27 **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 45283** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	37.6		250	298.9		mg/Kg		105	90 - 110	1	20

Lab Sample ID: 890-3958-11 MS Client Sample ID: FS37 **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 45283** 

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	113		248	367.8		ma/Ka		103	90 - 110	 	_

Lab Sample ID: 890-3958-11 MSD Client Sample ID: FS37 **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 45283** 

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	113		248	370.0		mg/Kg		104	90 - 110	1	20

Lab Sample ID: MB 880-45081/1-A **Client Sample ID: Method Blank Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 45284** 

Result Qualifier Analyte RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 02/02/23 17:19 mg/Kg

MB MB

Lab Sample ID: LCS 880-45081/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 45284

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	262.7		ma/Ka		105	90 110	

Lab Sample ID: LCSD 880-45081/3-A **Client Sample ID: Lab Control Sample Dup Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 45284** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	263.9		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-3958-29 MS Client Sample ID: SW11

**Matrix: Solid** 

**Analysis Batch: 45284** 

e Result Qualifier Added Result Qualifier Unit D %Rec Limits

Lab Sample ID: 890-3958-29 MSD Client Sample ID: SW11 **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 45284** 

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	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	227		250	470.7		mg/Kg		98	90 - 110	0	20

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**Prep Type: Soluble** 

# **QC Association Summary**

Client: Ensolum Job ID: 890-3958-1
Project/Site: VGEU 30-01 SDG: Lea County NM

#### **GC VOA**

#### Prep Batch: 45396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Total/NA	Solid	5035	
890-3958-28	SW10	Total/NA	Solid	5035	
890-3958-29	SW11	Total/NA	Solid	5035	
890-3958-30	SW12	Total/NA	Solid	5035	
890-3958-31	SW13	Total/NA	Solid	5035	
890-3958-32	SW14	Total/NA	Solid	5035	

#### **Analysis Batch: 45523**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Total/NA	Solid	8021B	45396
890-3958-28	SW10	Total/NA	Solid	8021B	45396
890-3958-29	SW11	Total/NA	Solid	8021B	45396
890-3958-30	SW12	Total/NA	Solid	8021B	45396
890-3958-31	SW13	Total/NA	Solid	8021B	45396
890-3958-32	SW14	Total/NA	Solid	8021B	45396

#### **Analysis Batch: 45526**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-33	SW15	Total/NA	Solid	8021B	45527

#### Prep Batch: 45527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-33	SW15	Total/NA	Solid	5035	

#### **Analysis Batch: 45596**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Total/NA	Solid	Total BTEX	
890-3958-28	SW10	Total/NA	Solid	Total BTEX	
890-3958-29	SW11	Total/NA	Solid	Total BTEX	
890-3958-30	SW12	Total/NA	Solid	Total BTEX	
890-3958-31	SW13	Total/NA	Solid	Total BTEX	
890-3958-32	SW14	Total/NA	Solid	Total BTEX	
890-3958-33	SW15	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### **Analysis Batch: 45572**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Total/NA	Solid	8015 NM	
890-3958-28	SW10	Total/NA	Solid	8015 NM	
890-3958-29	SW11	Total/NA	Solid	8015 NM	
890-3958-30	SW12	Total/NA	Solid	8015 NM	
890-3958-31	SW13	Total/NA	Solid	8015 NM	
890-3958-32	SW14	Total/NA	Solid	8015 NM	
890-3958-33	SW15	Total/NA	Solid	8015 NM	

#### Prep Batch: 45638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Total/NA	Solid	8015NM Prep	
890-3958-28	SW10	Total/NA	Solid	8015NM Prep	
890-3958-29	SW11	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

Client: Ensolum Project/Site: VGEU 30-01

Job ID: 890-3958-1 SDG: Lea County NM

#### **GC Semi VOA (Continued)**

#### Prep Batch: 45638 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-30	SW12	Total/NA	Solid	8015NM Prep	
890-3958-31	SW13	Total/NA	Solid	8015NM Prep	
890-3958-32	SW14	Total/NA	Solid	8015NM Prep	
890-3958-33	SW15	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 45733**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Total/NA	Solid	8015B NM	45638
890-3958-28	SW10	Total/NA	Solid	8015B NM	45638
890-3958-29	SW11	Total/NA	Solid	8015B NM	45638
890-3958-30	SW12	Total/NA	Solid	8015B NM	45638
890-3958-31	SW13	Total/NA	Solid	8015B NM	45638
890-3958-32	SW14	Total/NA	Solid	8015B NM	45638
890-3958-33	SW15	Total/NA	Solid	8015B NM	45638

#### **HPLC/IC**

#### Leach Batch: 45081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Soluble	Solid	DI Leach	
890-3958-28	SW10	Soluble	Solid	DI Leach	
890-3958-29	SW11	Soluble	Solid	DI Leach	
890-3958-30	SW12	Soluble	Solid	DI Leach	
890-3958-31	SW13	Soluble	Solid	DI Leach	
890-3958-32	SW14	Soluble	Solid	DI Leach	
890-3958-33	SW15	Soluble	Solid	DI Leach	

#### Analysis Batch: 45284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3958-27	SW09	Soluble	Solid	300.0	45081
890-3958-28	SW10	Soluble	Solid	300.0	45081
890-3958-29	SW11	Soluble	Solid	300.0	45081
890-3958-30	SW12	Soluble	Solid	300.0	45081
890-3958-31	SW13	Soluble	Solid	300.0	45081
890-3958-32	SW14	Soluble	Solid	300.0	45081
890-3958-33	SW15	Soluble	Solid	300.0	45081

Client Sample ID: SW09

Project/Site: VGEU 30-01

Client: Ensolum

Lab Sample ID: 890-3958-27

Matrix: Solid

Date Collected: 01/25/23 12:30 Date Received: 01/25/23 15:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	45396	02/03/23 12:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45523	02/05/23 20:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45596	02/06/23 12:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45572	02/09/23 09:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45638	02/06/23 16:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45733	02/08/23 13:53	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45081	01/30/23 15:56	KS	EET MID
Soluble	Analysis	300.0		1			45284	02/02/23 18:29	CH	EET MID

**Client Sample ID: SW10** Lab Sample ID: 890-3958-28

Date Collected: 01/25/23 12:35 **Matrix: Solid** 

Date Received: 01/25/23 15:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	45396	02/03/23 12:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45523	02/05/23 20:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45596	02/06/23 12:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45572	02/09/23 09:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45638	02/06/23 16:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45733	02/08/23 14:14	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	45081	01/30/23 15:56	KS	EET MID
Soluble	Analysis	300.0		1			45284	02/02/23 18:34	CH	EET MID

**Client Sample ID: SW11** Lab Sample ID: 890-3958-29 Date Collected: 01/25/23 12:40 **Matrix: Solid** 

Date Received: 01/25/23 15:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45396	02/03/23 12:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45523	02/05/23 21:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45596	02/06/23 12:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45572	02/09/23 09:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45638	02/06/23 16:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45733	02/08/23 14:36	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	45081	01/30/23 15:56	KS	EET MID
Soluble	Analysis	300.0		1			45284	02/02/23 18:39	CH	EET MID

**Client Sample ID: SW12** Lab Sample ID: 890-3958-30

Date Collected: 01/25/23 12:45 Date Received: 01/25/23 15:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	45396	02/03/23 12:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45523	02/05/23 21:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45596	02/06/23 12:58	AJ	EET MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

Job ID: 890-3958-1 SDG: Lea County NM

Client Sample ID: SW12

Project/Site: VGEU 30-01

Client: Ensolum

Lab Sample ID: 890-3958-30

Matrix: Solid

Date Collected: 01/25/23 12:45 Date Received: 01/25/23 15:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			45572	02/09/23 09:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45638	02/06/23 16:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45733	02/08/23 14:58	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	45081	01/30/23 15:56	KS	EET MID
Soluble	Analysis	300.0		1			45284	02/02/23 18:53	CH	EET MID

Lab Sample ID: 890-3958-31 **Client Sample ID: SW13** Date Collected: 01/25/23 12:50 **Matrix: Solid** 

Date Received: 01/25/23 15:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	45396	02/03/23 12:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45523	02/05/23 21:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45596	02/06/23 12:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45572	02/09/23 09:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45638	02/06/23 16:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45733	02/08/23 16:34	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	45081	01/30/23 15:56	KS	EET MID
Soluble	Analysis	300.0		1			45284	02/02/23 18:57	CH	EET MID

**Client Sample ID: SW14** Lab Sample ID: 890-3958-32 Date Collected: 01/25/23 12:55 **Matrix: Solid** 

Date Received: 01/25/23 15:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	45396	02/03/23 12:56	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45523	02/05/23 22:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45596	02/06/23 12:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45572	02/09/23 09:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45638	02/06/23 16:38	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45733	02/08/23 16:56	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	45081	01/30/23 15:56	KS	EET MID
Soluble	Analysis	300.0		1			45284	02/02/23 19:11	CH	EET MID

**Client Sample ID: SW15** Lab Sample ID: 890-3958-33 Date Collected: 01/25/23 13:00

Date Received: 01/25/23 15:32

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	45527	02/05/23 10:08	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45526	02/05/23 14:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45596	02/06/23 12:09	AJ	EET MID
Total/NA	Analysis	8015 NM		1			45572	02/09/23 09:20	AJ	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.01 g 1 uL	10 mL 1 uL	45638 45733	02/06/23 16:38 02/08/23 17:18		EET MID EET MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

#### **Lab Chronicle**

Client: Ensolum Job ID: 890-3958-1
Project/Site: VGEU 30-01 SDG: Lea County NM

Client Sample ID: SW15 Lab Sample ID: 890-3958-33

Date Collected: 01/25/23 13:00 Matrix: Solid
Date Received: 01/25/23 15:32

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method **Factor Amount** Number or Analyzed Analyst Type Run **Amount** Lab Soluble DI Leach 5.05 g 50 mL 45081 01/30/23 15:56 EET MID Leach 300.0 02/02/23 19:16 CH Soluble Analysis 45284 **EET MID** 1

#### **Laboratory References:**

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

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# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-3958-1
Project/Site: VGEU 30-01 SDG: Lea County NM

#### **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas	NE	ELAP	T104704400-22-25	06-30-23	
The fellowing an about	a ara inaludad in this rand			TI. 1. 12. 4	
		ort, but the laboratory is r	not certified by the governing authority.	inis list may include analytes for	
the agency does not o	offer certification.	•	, , ,	This list may include analytes for	
		Matrix	Analyte	I nis list may include analytes for	
the agency does not o	offer certification.	•	, , ,	I his list may include analytes for	

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### **Method Summary**

Client: Ensolum

Project/Site: VGEU 30-01

Job ID: 890-3958-1

SDG: Lea County NM

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**

Client: Ensolum

Project/Site: VGEU 30-01

Job ID: 890-3958-1 SDG: Lea County NM

Depth

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3958-27	SW09	Solid	01/25/23 12:30	01/25/23 15:32	0-4'
890-3958-28	SW10	Solid	01/25/23 12:35	01/25/23 15:32	0-4'
890-3958-29	SW11	Solid	01/25/23 12:40	01/25/23 15:32	0-4'
890-3958-30	SW12	Solid	01/25/23 12:45	01/25/23 15:32	0-4'
890-3958-31	SW13	Solid	01/25/23 12:50	01/25/23 15:32	0-4'
890-3958-32	SW14	Solid	01/25/23 12:55	01/25/23 15:32	0-4'
890-3958-33	SW15	Solid	01/25/23 13:00	01/25/23 15:32	0-4'

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Relinquished by: (Signature)

Received by: (Signature)

SC-38-

15237

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020.2

service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control Eurofins Xenco. A minimum charge of \$35.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

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**Environment Testing** 

13 14

## Chain of Custody

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

Work Order No:

miect Manager K	Kalei Jennings				Bill to: (if different)	erent)	Kale	Kalei Jennings	ings	Work	Work Order Comments
	Ensolum, LLC				Company Name:	ame:	Ens	Ensolum, LLC	LLC	Program: UST/PST   PRP	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	601 N Marienfeld St Suite 400	St Suit	te 400		Address:		601	N Mar	601 N Marienfeld St Suite	400	
e ZIP:	Midland, TX 79701	2			City, State ZIP	ZIP:	Mid	land, T	Midland, TX 79701	Reporting: Level II Level	Reporting: Level II  Level III  PST/UST  TRRP  Level IV
	817-683-2503			Email:	Email: kjennings@ensolum.com	@ensoi	um.co	13		Deliverables: EDD	ADaPT Other:
roject Name:	VGEL	VGEU 30-01		Turn	Turn Around					ANALYSIS REQUEST	Preservative Codes
roject Number:	03D20	03D2057005		✓ Routine	Rush	Pres.	de .				None: NO DI Water: H <sub>2</sub> O
roject Location:	Lea County, NM	unty, N	<u> </u>	Due Date:							Cool: Cool MeOH: Me
ampler's Name:	Dmitry Nikanorov	likanoro	V	TAT starts th	TAT starts the day received by	by					HCL: HC HNO3: HN
Ŏ #				the lab, if rec	the lab, if received by 4:30pm		13		_		H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank:	7	Yes No	Wet Ice:	No Ger	nete		-			H₃PO₄: HP
amples Received Intact	(A)	No 1	Thermometer ID:	Ö	TOW-OF	7.7					NaHSO <sub>4</sub> : NABIS
Cooler Custody Seals:	Yes No	MIA C	Correction Factor:	ctor:	-D.	n					Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
ample Custody Seals:		T VIII	Temperature Reading:	Reading:	7.7	S	(EF	_			Zn Acetate+NaOH: Zn
otal Containers:		C	Corrected Temperature	nperature:	4.2	0	DES		021	890-3958 Chain of Custody	NaOH+Ascorbic Acid: SAPC
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth Co	Grab/ # of Comp Cont	플 및 CHLOR	TPH (80	BTEX (8		Sample Comments
FS27	S	0,	1/25/2023	9:30	4' Cc	Comp 1	×		×		
FS28	S	o,	1/25/2023	9:30	4' Cc	Comp 1	×	×	×		
FS29	S		1/25/2023	9:35	4' Cc	Comp 1	×	×	×		Incident Number
FS30	S	0,	1/25/2023	9:35	4' Cc	Comp 1	×	×	×		
FS31	S		1/25/2023	9:40	4' Cc	Comp 1	×	×	×		
FS32	S		1/25/2023	9:40	4' Cc	Comp 1	×	×	×		
FS33	S		1/25/2023	9:45	4' Co	Comp 1	×	×	×		
FS34	S		1/25/2023	9:45	4' Co	Comp 1	×	×	*		
FS35	S		1/25/2023	9:50	4' Co	Comp 1	×	×	×		
FS36	S		1/25/2023	9:50	4' Co	Comp 1	×	×	×		
Total 200.7 / 6010	0 200.8 / 6020:	O:	8R(	8RCRA 13PPM	M Texas 11	≥	Sb As	Ва	Be B Cd	Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag	SiO <sub>2</sub> Na Sr Tl Sn U V Zn
ircle Method(s) and Metal(s) to be analyzed	Metal(s) to be	analyze	a	TCLP / SF	TCLP / SPLP 6010: 8RCRA	8RCR/	A Sb As	As Ba	Ba Be Cd	Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg	Hg: 1631 / 245.1 / 7470 / 7471

Sampler's Name:

Project Number Project Name: Phone:

ircle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020

8RCRA

13PPM

Texas 11

Al Sb

As Ba

Ве

σ S Ca Ö င္ပ

Cu Fe Pb

Mg

Mn Mo Ni K

Se

Ag SiO<sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U

FS45 FS44 FS43

SS

1/25/2023

4

Comp

/25/2023

/25/2023

10:15 10:15

Comp Comp FS41

S S S

1/25/2023 1/25/2023

10:05

Comp

10:00

Comp Comp Comp Comp Comp Grab/

FS42

SSS

1/25/2023

10:10

4 4 4 4

Comp Comp

1/25/2023

10:05

FS39

1/25/2023

10:00

1/25/2023 1/25/2023

9:55 9:55

×

FS40

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**Environment Testing** 

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## Chain of Custody

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

					RE				<u> </u>		
					REQUEST	Deliverables: EDD ADaF	Reporting: Level II  Level III  PST/UST  TRRP	State of Project:	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	Work Order Comments	www.xenco.com
H,PO4: HP	H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub>	HCL: HC	Cool: Cool	None: NO	Preserv	ADaPT  Other	ST/UST 🗌 TRR		vnfields∐ RRC	Comments	n Page
	NaOH: Na	HNO <sub>3</sub> : HN	меОН: Ме	DI Water: H <sub>2</sub> O	Preservative Codes		P   Level IV		☐ Superfund ☐		2 of 2
											2/12

		σ			
		4			
		553	1.05.03	Day 1832 1832	Dh. Kara
Signature) Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by (Signature)	Relinquished by: (Signature)

NaOH+Ascorbic Acid: SAPC

Sample Comments

Incident Number

Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>: NaSO<sub>3</sub>

Zn Acetate+NaOH: Zn

NaHSO4: NABIS

SAMPLE RECEIPT

Temp Blank:

Yes No

Wet ice:

Yes

Z

**Parameters** 

Yes No

Thermometer ID:

N<sub>O</sub>

samples Received Intact:

ooler Custody Seals:

otal Containers:

Sample Identification

Matrix

Sampled

Sampled

Date

Time

Depth

Cont # of

TPH (8015)

BTEX (8021

FS37

**FS38** 

ample Custody Seals:

Yes Yes

S

N/A NA

Temperature Reading Correction Factor.

CHLORIDES (EPA: 300.0)

Corrected Temperature

Sampler's Name:

**Dmitry Nikanorov** Lea County, NM

Due Date:

✓ Routine

Rush

Code

**Turn Around** 

ANALYSI

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

03D2057005

VGEU 30-01

roject Location roject Number roject Name: Phone:

817-683-2503 Midland, TX 79701 601 N Marienfeld St Suite

Email: | kjennings@ensolum.com

City, State ZIP:

Midland, TX 79701

ity, State ZIP:

ddress:

ompany Name: roject Manager:

Kalei Jennings

Bill to: (if different)

Kalei Jennings

Ensolum, LLC

Company Name:

601 N Marienfeld St Suite 400

Ensolum, LLC

400

Work Order No:

### eurofins Xenco **Environment Testing**

Company Name: Project Manager:

Ensolum, LLC Kalei Jennings

City, State ZIP: Address:

Midland, TX 79701

City, State ZIP:

Midland, TX 79701

601 N Marienfeld St Suite 400

Company Name: Bill to: (if different)

Ensolum, LLC Kalei Jennings

601 N Marienfeld St Suite 400

# Chain of Custody

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

www.xenco.com Page 3 of 4
Work Order Comments
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Number			6							
None: NO Cool: Cool HcL: HC H <sub>2</sub> S04: H <sub>2</sub> H <sub>3</sub> PO <sub>4</sub> : HP NaHSO <sub>4</sub> : NABIS Na <sub>3</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub> Zn Acctate+NaOh NaOH+Ascorbic A Sample Co Sample Co Ja Sr TI Sn U V Ja Sr TI Sn U V			4	0:13	5	7	2000	600		Went of I
None: NO Cool: Cool HcL: HC H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> H <sub>3</sub> PO <sub>4</sub> : HP NaHSO <sub>4</sub> : NABIS Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub> Zn Acetate+NaOH NaOH+Ascorbic / Sample Co  Incident  In Sr TI Sn U \ 1245.1/7470 / 7		Toolsed by (biginant)	Nelliquisited by (orginature)	ale/ Inile	2 6		(Signature)	Keceived by	7	Relinquished by: (Signati
None: NO Cool: Cool HcL: HC H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> H <sub>3</sub> PO <sub>4</sub> : HP NaHSO <sub>4</sub> : NABIS Na <sub>3</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub> Zn Acetate+NaOh NaOH+Ascorbic / Sample Co Sample Co	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	ato/Time			(Signatura)	Daniel		P. Francisk L. (Simple
None: NO Cool: Cool HCL: HC H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> H <sub>3</sub> PO <sub>4</sub> : MP NaHSO <sub>4</sub> : NaSIS Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub> Zn Acetate+NaOH NaOH+Ascorbic A Sample Co Sample Co 2 Na Sr TI Sn U 3 31/245.1/7470 / 7		reanger of terms and conditions countries beyond the control orced unless previously negotiated.	s Xenco, its affiliates and subcontractors. It assigns ses incurred by the client if such losses are due to cifins Xenco, but not analyzed. These terms will be enfo	iny to Eurofinises or expens	or any los	order from clk esponsibility f 5 for each sa	a valid purchase of a not assume any retained a charge of a	samples constitutes of samples and shall oplied to each projec	d relinquishment of te only for the cost of \$85.00 will be a	ce: Signature of this document an ervice. Eurofins Xenco will be liab urofins Xenco. A minimum charge
Trum Around   Pres.   Pres.   No   Due Date:   Trum Edy received by the lab. if received by 4.30pm   Parameter   Peach   Parameter   Parameter   Peach   Parameter   Par	410 / 141	Ag II U ng. 16317245.177	Se Cd Cr Co Cu Po Mn Mo NI Se	As Ball	RA SE	010: 8RC	CLP / SPLP 6	ed T	s) to be analyz	cle Method(s) and Metal(
All Name:   VGEU 30-01   Turn Around   Pres.   ANALYSIS REQUEST   Preservant   Analysis Request   Analysis	311 0 V ZII	MO NIN SE AG SIC2 NA SI II	B Cd Ca Cr Co Cu Fe F	As Ba Be		exas 11	A 13PPM To	8RC	0.8 / 6020:	Total 200.7 / 6010 20
Turn Anomal	C 11 1/ 75	15 N. C. A. C. N. C. T.								Ш
ANALYSIS REQUEST					-					1
All Name:   VGEU 30-01   Trum Around   Tru					_			+	<b>√</b>	
ANALYSIS REQUEST   Preservation   Lea County, NM   Due Date:   Turn down   Preservation   Lea County, NM   Due Date:   Tat starts the day received by at 30pm								F715	1	
ANALYSIS REQUEST   Turn Around   ANALYSIS REQUEST   Preservation   Analysis Request   Analysis Request   Analysis Request									1	
ANALYSIS REQUEST   Free-Watt   Free-Watt   Free-Watt   Free-Free Free-Free Free Free Free Free			×			Comp			S	FS52
ANALYSIS REQUEST   Analysis Requirements   Analysis Requirements   Analysis Request   A			×	-		Comp			တ	FS51
Turn Around   Turn Around   Turn Around   Turn Around   Preservative   Turn Around   Preservative   Turn Around   Preservative   Turn Around   Preservative   Preservativ			×	-	$\vdash$	Comp			S	FS50
Turn Around	cident Number	3	×	-	-	Comp			S	FS49
ANALYSIS REQUEST   Freservative   Turn Around   ANALYSIS REQUEST   Preservative   ANALYSIS REQUEST   Preservative   ANALYSIS REQUEST   Preservative   ANALYSIS REQUEST   Preservative   ANALYSIS REQUEST   None: NO   None: NO   Cool: Cool   Cool:			×	-		Comp			ဟ	FS48
ANALYSIS REQUEST  ANALYSIS REQ			×	+-		Comp			S	FS47
# Name: VGEU 30-01 Turn Around Preservation: 03D2057005	nple Comments	San	BTEX (			Grab/ Comp	12 1		Matrix	Sample Identification
# Number: VGEU 30-01  # Number: O3D2057005  # Location: Lea County, NM  # Location: Lea County, NM  # Location: Dmitry Nikanorov  # Location: Dmitry Nikanorov  # Location: Temp Blank: Yes No  # No  # Preservati  # None: NO  # Cool: Cool  # Location: Temp Blank: Yes No  # No	scorbic Acid: SAPC	NaOH+A:	8021				rature:	Corrected Tempe		al Containers:
# Name: VGEU 30-01 Turn Around Pres.  # Number: 03D2057005	te+NaOH: Zn	Zn Acetat		S (E			ding	emperature Rea	No N/A	
# Name: VGEU 30-01 Turn Around ANALYSIS REQUEST Preservation: 03D2057005	NaSO <sub>3</sub>	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> .		PA:			X	ourection Factor	No N/A	
# Name: VGEU 30-01 Turn Around ANALYSIS REQUEST Preservation: 03D2057005	NABIS	NaHSO <sub>4</sub>		300			5	hermometer-to:	No	
# Name: VGEU 30-01 Turn Around ANALYSIS REQUEST Preservation: 03D2057005 Proutine Rush Code None: NO  # Location: Lea County, NM Due Date: Code Cool: Cool  # Location: Dmitry Nikanorov TAT starts the day received by the lab, if received by 4:30pm the lab, if received by 4:30pm	Ū	Н₃РО₄: Н		.0)			1	8	emp Blank:	
VGEU 30-01  Turn Around  ANALYSIS REQUEST  Preservati  O3D2057005  ☐ Routine ☐ Rush Code  Lea County, NM  Due Date:  Dmitty Nikanorov  TAT starts the day received by  ANALYSIS REQUEST  ANALYSIS REQUEST  Preservati  ANALYSIS REQUEST  Preservati  ANALYSIS REQUEST  Preservati  Analysis requiest  Ana		H <sub>2</sub> SO <sub>4</sub> : H <sub>3</sub>			rs	y 4:30pm	lab, if received b	41		井
VGEU 30-01  Turn Around  ANALYSIS REQUEST  Preservati  O3D2057005  ANALYSIS REQUEST  None: NO  Lea County, NM  Due Date:  Code  Cool: Cool		HCL: HC				ceived by	starts the day re		Dmitry Nikanoi	
VGEU 30-01 Turn Around ANALYSIS REQUEST Preservation of the code ANALYSIS REQUEST Preservation of the code ANALYSIS REQUEST None: NO		Cool: Coo					e Date:		Lea County, N	ject Location:
VGEU 30-01 Turn Around ANALYSIS REQUEST		None: NC			Code				03D2057005	ject Number:
	servative Codes	Pre	ANALYSIS REQUEST		_		Turn Aroui		VGEU 30-01	ject Name:

13 14

eurofins Xenco **Environment Testing** 

Phone:

817-683-2503 Midland, TX 79701

Email: kjennings@ensolum.com

City, State ZIP:

Midland, TX 79701

601 N Marienfeld St Suite 400

Company Name: Bill to: (if different)

Kalei Jennings

City, State ZIP:

Company Name: Project Manager

Ensolum, LLC

Kalei Jennings

601 N Marienfeld St Suite 400

**Dmitry Nikanorov** Lea County, NM 03D2057005 VGEU 30-01

Due Date:

✓ Routine

Rush

Code

**Turn Around** 

ANALYSIS REQUEST

Cool: Cool None: NO

МеОН: Ме DI Water: H<sub>2</sub>O **Preservative Codes** 

Project Number: Project Location:

Project Name:

## Chain of Custody

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

Work Order No:
www.xenco.com Page 4 of 4
Work Order Comments
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level III 🗍 Level III 🗎 PST/UST 📗 TRRP 📗 Level IV 🗎
Deliverables: EDD ☐ ADaPT ☐ Other:

5	ω	DN-Kouras	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractor 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 of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These ten	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 200.8	NIQ /			8W09	SW08	SW07	SW06	SW05	SW02	SW01	Sample Identification	Total Containers:	Sample Custody Seals: Yes	Cooler Custody Seals: Yes	Samples Received Intact: Yes	SAMPLE RECEIPT Ten	PO#	Sampler's Name: Drr	
		2	,   	alinquishment only for the c \$85.00 will t	to be ana	200.8 / 6020:	-	2		S	S	S	S	S	S	S	Matrix		No N/A	NO N/A	s No	Temp Blank:		<b>Dmitry Nikanorov</b>	
		gran	Receive	nt of samples cons cost of samples and be applied to each	alyzed	8F		1115/13	,	1/25/2023	1/25/2023	1/25/2023	1/25/2023	1/25/2023	1/25/2023	1/25/2023	Date Sampled	Corrected Temperature	A Temperature Reading	A Correction Factor	Thermometer	Yes No		norov	
	,	lacks	Received by: (Signature)	titutes a valid pui d shall not assum project and a cha	TCLP / SF	RCRA 13PF				13:00	12:55	12:50	12:45	12:40	12:35	12:30	Time Sampled	emperature:	Reading.	ador-)	3	Wet ice:	the lab, if rec	TAT starts th	1
	1	tixt	lure)	rchase order fr ie any respons arge of \$5 for e	TCLP / SPLP 6010: 8RCRA	M Texas				0-4' Co	0-4' Co	0-4' C	0-4' Co	0-4' Co	0-4' Co	0-4' Co	Depth G					Yes No	the lab, if received by 4:30pm	TAT starts the day received by	
-		-1-		om client o ibility for a ach sample	8RCRA	11 AI				Comp 1	Comp 1	Comp 1	Grab/ # of Comp Cont			P	araı	nete	L.,	by					
		-25:23	Date/Time	ompany to ny losses o e submitted	Sb As	Sb As				×	×	×	×	×	×	×	CHLOR	IDE	S (E	PA:	300	0)			
		23	Time	Eurofins or expense	Ba Be	Ва Ве				×	×	×	×	×	×	×	TPH (8)	_			_		_		_
o	4	1527	Relinquished by: (Signature)		Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	8RCRA 13PPM Texas 11 AISb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn N				×	×	×	×	×	×	×									
			Received by: (Signature) Date/Time	s. It assigns standard terms and conditions are due to circumstances beyond the control unless previously negotiated.	Ag TI U Hg: 1631 / 245.1 / /4/0 / /4/1	X Se /								Incident Number			Sample Comments	NaOH+Ascoroic Acid. SAFC	Zn Acetate+NaOH: Zn	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>	NaHSO <sub>4</sub> . NABIS	H₃PO₄: HP	H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na		

### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3958-1

SDG Number: Lea County NM

Login Number: 3958 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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

Euronnis Carisbau

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### **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-3958-1

SDG Number: Lea County NM

List Source: Eurofins Midland
List Number: 2
List Creation: 01/27/23 11:00 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").



**APPENDIX 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	NAPP2200643457Typ	e te
District RP		
Facility ID		
Application ID		

### **Release Notification**

### **Responsible Party**

Responsible Party	ConocoPhillips	OGRID	217817
Contact Name	Kelsy Waggaman	Contact Telephone	(432) 688 - 9057
Contact email	Kelsy.Waggaman@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2200643457
Contact mailing address	600 West Illinois Avenue, Midlar	nd, Texas 79701	

			Location	of R	elease Sourc	e	
Latitude	32.786	389			Longitude	103.495278	
			(NAD 83 in dec	rimal de	grees to 5 decimal plac	es)	
Site Name		VGEU 30-0	1		Site Type	FlowLine	
Date Release	Discovered	December 2	21, 2021		API# (if applicable)		
Unit Letter	Section	Township	Range		County		
0	31	17S	35E		Lea		
Surface Owne	r: 🔳 State	☐ Federal ☐ Tr	ibal Private (A	Vame:			)

### Nature and Volume of Release

Crude Oil	(s) Released (Select all that apply and attach calculations or specific Volume Released (bbls) 7.4	Volume Recovered (bbls) 0
Produced Water	Volume Released (bbls) 66.4	Volume Recovered (bbls) 0
	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 caused by a hole in the poly flowline.

The release was in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. ConocoPhillips will evaluate the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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Incident ID NAPP2200643457
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Was this a major	If YES, for what reason(s) does the resp	onsible party consider this a major release?
release as defined by	The release was greater than	
19.15.29.7(A) NMAC?	The release was greater than i	
Yes No		
If YES, was immediate no	Lotice given to the OCD? By whom? To	whom? When and by what means (phone, email, etc)?
N/A	g	(,,,,,,,,,,,,,,,,,,
	Initial 1	Response
The responsible	party must undertake the following actions immedia	tely unless they could create a safety hazard that would result in injury
■ The source of the rele	ease has been stopped.	
■ The impacted area ha	s been secured to protect human health a	nd the environment.
Released materials ha	ave been contained via the use of berms o	dikes, absorbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed	and managed appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explai	n why:
Per 19.15.29.8 B. (4) NM	AC 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 remedia	al efforts have been successfully completed or if the release occurred
within a lined containmen	nt area (see 19.15.29.11(A)(5)(a) NMAC)	, please attach all information needed for closure evaluation.
		e best of my knowledge and understand that pursuant to OCD rules and
		otifications and perform corrective actions for releases which may endanger eOCD does not relieve the operator of liability should their operations have
failed to adequately investig	ate and remediate contamination that pose a th	reat to groundwater, surface water, human health or the environment. In
and/or regulations	•	of responsibility for compliance with any other federal, state, or local laws
Brittad Name Brittar	ny N. Esparza  za@ConocoPhillips.com	Title: Environmental Technician
Timed Name	- Donarne	1/6/2022
Signature:		
email: Brittany.Espar	za@ConocoPhillips.com	Telephone: (432) 221-0398
OCD Only		
Received by: Ramona M	arcus	Date:

M				L48 Spill Volume	Estimate Form				
Received by OCI	D: 1/6/2022 1	12:07F58iiP/Mame & Number: \	VGEU 30-01						Page 3 of 4
Asset Area:			Buckeye	Buckeve					
	R/	Release Discovery Date & Time: 1	12/21/2021 8:30am	A:		NA.	XPP22006434	£57	
		Release Type: 0							
	Provide any	known details about the event:	Hole in 3in poly flov	wline. Closed 2in ball valve on tubing, o	casing and header to isolate fluids				
				Spill Calculation - Subsu	rface Spill - Rectangle				
	Was	the release on pad or off-pad?			See reference table	e below			
Has	it rained at least a	a half inch in the last 24 hours?	/		See reference table	e below			
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	102.0	45.0	5.00	15.32%	340.425	52.153	10.00%	5.215	46.938
Rectangle B	12.0	54.0	6.00	15.32%	57.672	8.835	10.00%	0.884	7.952
Rectangle C	54.0	9.0	2.00	15.32%	14.418	2.209	10.00%	0.221	1.988
Rectangle D	78.0	12.0	5.00	15.32%	69.420	10.635	10.00%	1.064	9.572
Rectangle E					0.000	0.000		0.000	0.000
Rectangle F				4 10	0.000	0.000		0.000	0.000
Rectangle G				4	0.000	0.000		0.000	0.000
Rectangle H				A la	0.000	0.000		0.000	0.000
Rectangle I	. 1/6/202	2 4 27 27 DIA		A La	0.000	0.000		0.000	0.000
Released to Imag	ging: 1/0/202,	2 4:2/:2/ PM		4 1	0.000	0.000		0.000	0.000
					Total Volume Release:	73.832		7.383	66.449

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

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

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

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

CONDITIONS

Action 70862

### CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	70862
	Action Type:
	[C-141] Release Corrective Action (C-141)

### CONDITIONS

Created By		Condition Date
rmarcus	None	1/6/2022

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Incident ID	NAPP2200643457
District RP	
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### Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.			
What is the shallowest depth to groundwater beneath the area affected by the release?	50-100 (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?	X 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?	X 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?	X 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.			

Characterization Report Checklist: Each of the following items must be included in the report.
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☐ Field data
Data table of soil contaminant concentration data
Depth to water determination
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
Boring or excavation logs
Photographs including date and GIS information
☐ Topographic/Aerial maps
Laboratory data including chain of custody

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

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HSE Specialist

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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:Bryce Wagoner  Signature:Bryce Wagoner@mavresources.com	Title: _Permian HSE Specialist II  Date:02/15/2023  Telephone:928-241-1862	
OCD Only  Received by:	Date:	

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	1 180 00 0
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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.

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

✓ A scaled site and sampling diagram as described in 19.15.29.11 NMAC		
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)		
Delaboratory analyses of final sampling (Note: appropriate OD	C District office must be notified 2 days prior to final sampling)	
Description of remediation activities		
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rethuman health or the environment. In addition, OCD acceptance of	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in	
Printed Name: Bryce Wagoner	Title: Permian HSE Specialist II	
Signature:  Bryce.Wagoner@mavresources.com	Date: 2/15/2023	
email: Bryce.Wagoner@mavresources.com	Telephone: (928) 241-1862	
OCD Only		
Received by:	Date:	
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.	
Closure Approved by:   Jannifar Nobui  Discourse Approved by:	Date: _03/13/2023	
Printed Name: Jennifer Nobui	Title: Environmental Specialist A	



### Photographic Log Maverick Natural Resources, LLC

VGEU 30-01 Flowline Incident Number NAPP2200643457





Photograph 1
Description: Liner Installation.

Date: 03/01/2023

Photograph 2
Description: Liner Installation.

Date: 03/01/2023





Photograph 3
Description: Liner Installation.

Date: 03/01/2023

Photograph 4

Date: 03/01/2023

Description: Liner Installation.



### Photographic Log Maverick Natural Resources, LLC VGEU 30-01 Flowline Incident Number NAPP2200643457







Photograph 2
Description: Completed Backfill.



Photograph 3
Description: Completed Backfill.



Photograph 4 Date: 03/01/2023 Description: Completed Backfill.

Page 2 of 2

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

CONDITIONS

Action 186429

### **CONDITIONS**

Operator:	OGRID:
Maverick Permian LLC	331199
1111 Bagby Street Suite 1600	Action Number:
Houston, TX 77002	186429
	Action Type:
	[C-141] Release Corrective Action (C-141)

### CONDITIONS

Created By		Condition Date
jnobui	Closure Report Approved.	3/13/2023