

October 7, 2022

District 1 New Mexico Oil Conservation Division 1625 North French Drive Hobbs, New Mexico 88240

#### Re: Closure Request Harrier 35 Federal Com #001H Incident Number NAPP2222438377 Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this Closure Request to document site assessment and soil sampling activities performed at the Harrier 35 Federal Com #001H (Site). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of crude oil within the lined earthen berm containment at the Site. Based on field observations, field screening activities, and laboratory analytical results from the soil sampling events, COG is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2222438377.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 35, Township 25 South, Range 32 East, in Lea County, New Mexico (32.08875° N, 103.6421° W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 12, 2022, a tank overflow resulted in the release of approximately 9.5 barrels (bbls) of crude oil into the lined earthen berm containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 9 bbls of the released fluids were recovered from within the lined containment. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) and submitted a Release Notification Form C-141 on August 12, 2022. The release was assigned Incident Number NAPP2222438377. A 48-hour advance notice of liner inspection was provided via email on August 29, 2022 to the NMOCD District I office. A liner integrity inspection was conducted by Ensolum personnel on September 2, 2022 following the fluid recovery, and upon inspection the liner was determined to be insufficient.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to

Harrier 35 Federal Com #001H COG Operating, LLC

# 🔁 E N S O L U M

groundwater data is United States Geological Survey (USGS) well 320504103361801, located approximately 2.25 miles east of the Site. The groundwater well has a reported depth to groundwater of 257 feet bgs and a total depth of 320 feet bgs. Regionally, depth to groundwater ranges from 107 feet to 450 feet bgs. Depth to water beneath the Site has been *reasonably determined* to be greater than 100 feet bgs, based on nearby water well data and regional depth to water measurements. Well data utilized for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an emergent wetland, located approximately 158 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

#### SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On September 14, 2022, Ensolum personnel visited the Site to evaluate the release extent and conduct site assessment activities. Ensolum personnel advanced one borehole (BH01) via hand auger directly below the location of the tear in the liner identified during the liner integrity inspection. Two soil samples were collected from the borehole (BH01 and BH01A) at depths of 0.5 feet and 2 feet bgs to assess for the presence or absence of impacted soil. On September 27, 2022, four soil assessment samples (SS01 through SS04) were collected at a depth of 0.5 feet bgs around the lined containment to confirm the lateral extent of the release. Soil from the borehole and surface assessment samples were field screened for volatile organic compounds (VOCs) and chloride utilizing a calibrated photo-ionization detector (PID) and Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips, respectively. Field screening results and observations from the borehole was backfilled with the soil removed and the tear in the liner was repaired. The bore hole and surface sample locations are depicted on Figure 2. Photographic documentation was conducted during the Site visit and is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for bore hole soil samples BH01 and BH01A indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Site Closure Criteria. In addition, surface assessment samples SS01 through SS04 were compliant with the Site Closure Criteria and successfully defines the lateral extent of the release. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

Harrier 35 Federal Com #001H COG Operating, LLC

#### **CLOSURE REQUEST**

Following the failed liner integrity inspection at the Site, Ensolum personnel advanced one borehole, (BH01), within the lined containment to assess for the presence or absence of soil impacts resulting from the July 12, 2022 crude oil release within lined containment. Two delineation soil samples were collected from borehole BH01, at depths of 0.5) feet and 2 feet bgs. Laboratory analytical results for the borehole delineation samples indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Site Closure Criteria. In addition, surface assessment samples SS01 through SS04, collected at 0.5 feet bgs, were compliant with the most stringent Table 1 Closure Criteria. The release was contained laterally by the lined containment and the tear in the liner was subsequently repaired.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Closure Criteria directly beneath the tear in the liner, COG respectfully requests NFA for Incident Number NAPP2222438377. The final Form C- 141 is included in Appendix F. If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or kjennings@ensolum.com.

Sincerely, Ensolum, LLC

alei Jennings

Kalei Jennings Senior Project Manager

Daniel R. Moir, PG Senior Managing Geologist

cc: Charles Beauvais, ConocoPhillips Bureau of Land Management

Appendices:

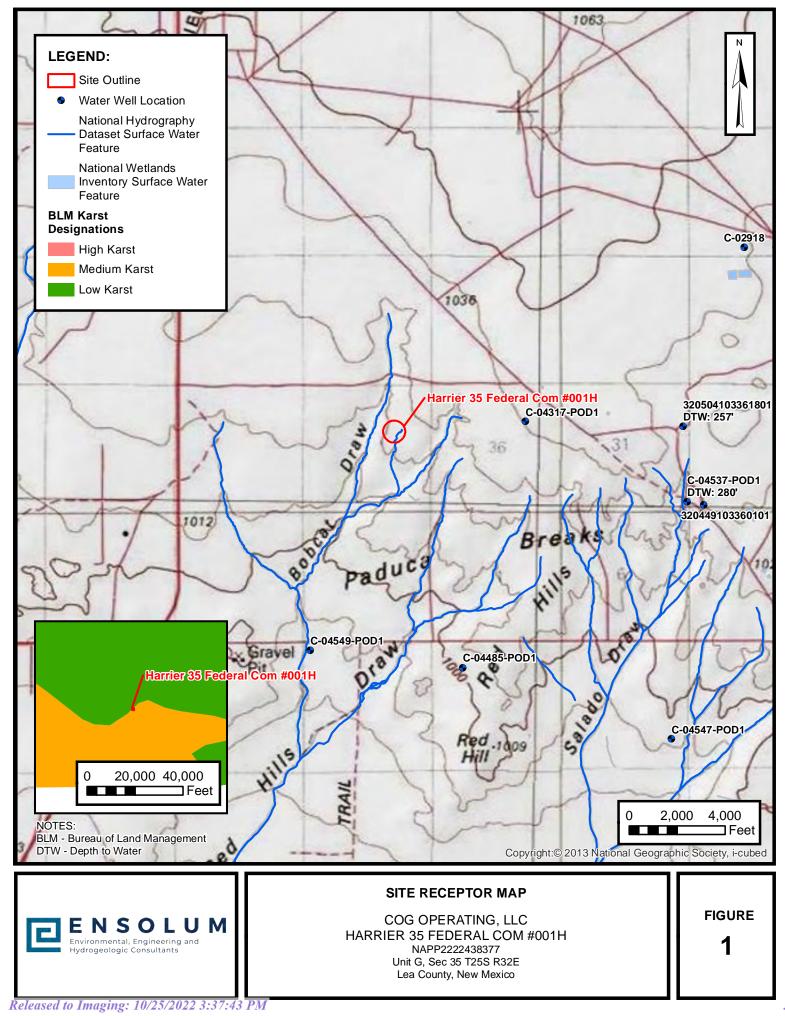
Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic/Soil Sampling Log
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141

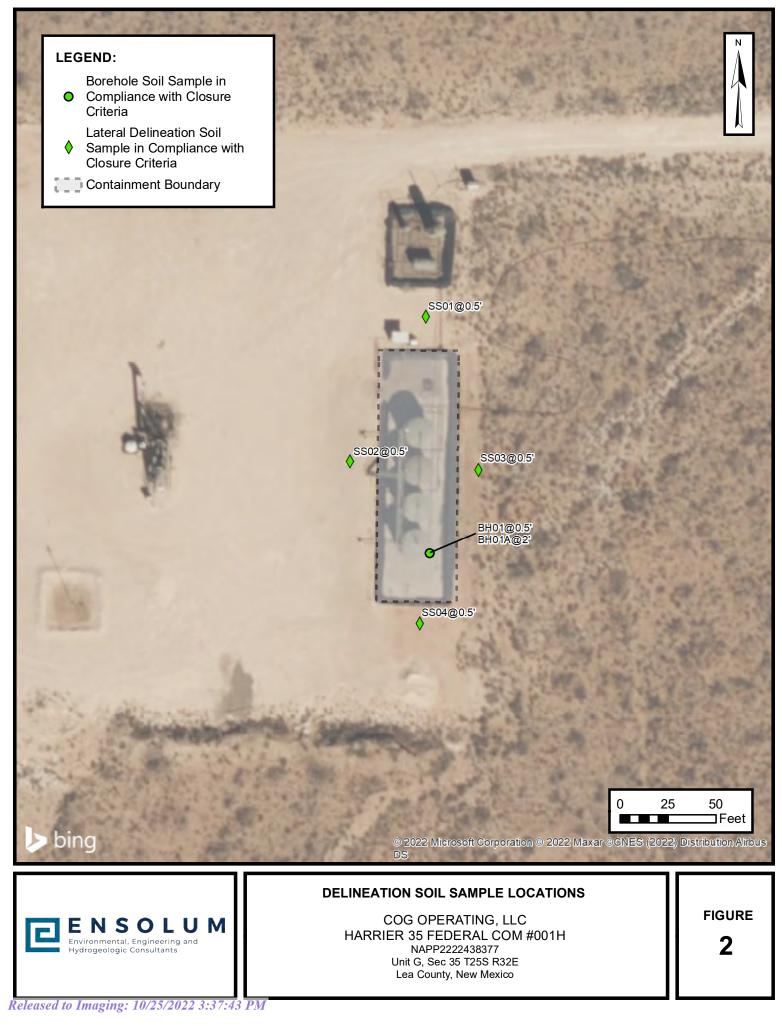


FIGURES

•

Received by OCD: 10/10/2022 9:42:21 AM







# TABLES

.

Released to Imaging: 10/25/2022 3:37:43 PM

# **E** N S O L U M

				Harrie C	TABLE 1 PLE ANALYTICA or 35 Federal Con COG Operating, L County, New Me	#001H LC				
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 C	losure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
				Bo	orehole Soil Sam	oles			•	
BH01	09/14/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	64.4
BH01A	09/14/2022	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	63.7
				Lateral	Delineation Soil	Samples				
SS01	09/27/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	18.5
SS02	09/27/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	14.8
SS03	09/27/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	22.3
SS04	09/27/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	168

GRO: Gasoline Range Organics

TPH: Total Petroleum Hydrocarbon

DRO: Diesel Range Organics

ORO: Oil Range Organics

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

.



# APPENDIX A

**Referenced Well Records** 



USGS Home Contact USGS Search USGS

### **National Water Information System: Web Interface**

USGS	Water	Resources
		1.000011000

Site	Information	×	
Data	Category:		

Geographic Area: United States

GO

# Click to hideNews Bulletins

- Explore the NEW <u>USGS National Water Dashboard</u> interactive map to access realtime water data from over 13,500 stations nationwide.
- Full News 🔊

# USGS 320504103361801 25S.33E.31.24232

Available data for this site SUMMARY OF ALL AVAILABLE DATA 🗸 GO

# **Well Site**

DESCRIPTION:

Latitude 32°05'21.6", Longitude 103°36'12.7" NAD83 Lea County, New Mexico , Hydrologic Unit 13070001 Well depth: 320 feet Land surface altitude: 3,403.00 feet above NGVD29. Well completed in "Other aquifers" (N99990THER) national aquifer. Well completed in "Ogallala Formation" (1210GLL) local aquifer

### AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1954-07-26	2013-01-16	3
Revisions	Unavailable (	site:0) (timese	eries:0)

### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <u>New Mexico Water Science Center Water-Data</u> <u>Inquiries</u>

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

Released to Imaging: 10/25/2022 3:37:43 PM

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory URL: https://waterdata.usgs.gov/nwis/inventory? agency\_code=USGS&site\_no=320504103361801

Page Contact Information: <u>New Mexico Water Data Support Team</u> Page Last Modified: 2022-08-15 22:31:12 EDT 0.27 0.26 caww01



Page 11 of 69



# APPENDIX B

Lithologic/Soil Sampling Log

•

							Sample Name: BH01 & BH01A	Date: 09/14/2022
	_			-			Site Name: Harrier 35	Date: 03/14/2022
	EI	N	S	ΟΙ	. U	M	Incident Number: NAPP22224383	77
	-				_	—	Job Number: 03D2024083	
	LITHO	OGIO		SAMPLING	GLOG		Logged By: Kase Parker	Method: HA
Coordinates: 3							Hole Diameter: 2"	Total Depth: 2'
Comments: Fie	ld screeni	ing co	onducted w			•	PID for chloride and vapor, respec factors included.	
Moisture Content Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	scriptions
Dry ND Dry ND	35.4 6.7	N N	BH01	×	0.5 1'	SW SW	Well graded sand/caliche Well graded red sand	
Dry ND	0.4	N	BH01A	×	2'	SP	Fine grained red sand	
				, , , , , , , , , , , , , , , , , , ,				



# APPENDIX C

Photographic Log

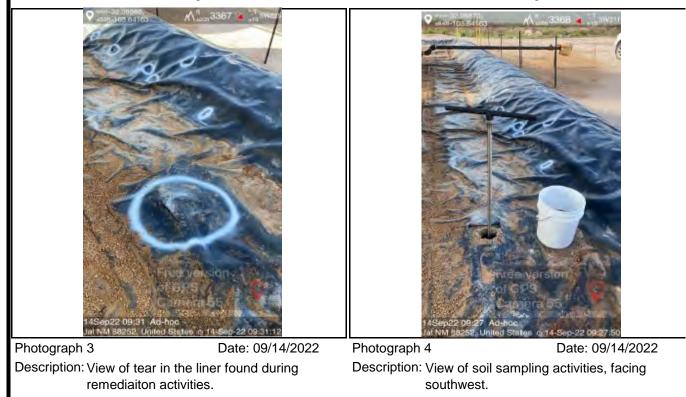


Photographic Log COG Operating, LLC Harrier 35 Federal Com #001H Incident Number NAPP2222438377





Photograph 1 Date: 09/02/2022 Description: View of tank battery and secondary containment, facing south. Photograph 2 Date: 09/02/2022 Description: View of tank battery and secondary containment, facing northeast.





# APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

# Received by OCD: 10/10/2022 9:42:21 AM

LINKS

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

Released to Imaging: 10/25/2022 3:37:43 PM

Visit us at:

Ask— The Expert

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-2962-1

Laboratory Sample Delivery Group: 03D2024083 Client Project/Site: Harrier 35

# For:

Ensolum 2351 W. Northwest Hwy Suite 1203 Dallas, Texas 75220

Attn: Joe Gable

Authorized for release by: 9/26/2022 2:32:58 PM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

Page 18 of 69

# **Table of Contents**

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

Page 19 of 69

	Definitions/Glossary		
Client: Ensolur	-	Job ID: 890-2962-1	
Project/Site: H		SDG: 03D2024083	
Qualifiers			ï
	Our life a Deseriation		
Qualifier F1	Qualifier Description MS and/or MSD recovery exceeds control limits.		
S1-	Surrogate recovery exceeds control limits, low biased.		
S1- 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+ U	Surrogate recovery exceeds control limits, high biased.		1
	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			j
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		i
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL NC	Method Quantitation Limit Not Calculated		
ND	Not Detected at the reporting limit (or MDL or EDL if shown)		
NEG	Negative / Absent		
POS	Positive / Present		
PQL	Practical Quantitation Limit		
PRES	Presumptive		
QC	Quality Control		
RER	Relative Error Ratio (Radiochemistry)		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RPD	Relative Percent Difference, a measure of the relative difference between two points		
TEF	Toxicity Equivalent Factor (Dioxin)		
TEQ	Toxicity Equivalent Quotient (Dioxin)		
TNTC	Too Numerous To Count		

TNTC Too Numerous To Count

.

#### **Case Narrative**

Client: Ensolum Project/Site: Harrier 35 Job ID: 890-2962-1 SDG: 03D2024083

#### Job ID: 890-2962-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-2962-1

#### Receipt

The samples were received on 9/14/2022 3:00 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 27.4°C

#### **Receipt Exceptions**

The following samples were received at the laboratory outside the required temperature criteria: BH01 (890-2962-1) and BH01A (890-2962-2). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to <CHOOSE\_ONE> proceed with/cancel analysis.

Samples out of temp range 27.6/27.4 Client wanted to proceed with testing.

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-35074 and analytical batch 880-35228 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-35074/1-A) and (LCSD 880-35074/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH01A (890-2962-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-34675 and analytical batch 880-34626 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (890-2976-A-1-C MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

4

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00199 U

<0.00199 U

<0.00199 U

<0.00398 U

<0.00199 U

RL

0.00199

0.00199

0.00199

0.00398

0.00199

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

09/21/22 14:46

09/21/22 14:46

09/21/22 14:46

09/21/22 14:46

09/21/22 14:46

Page 21 of 69

Job ID: 890-2962-1

# **Client Sample ID: BH01**

Date Collected: 09/14/22 08:35 Date Received: 09/14/22 15:00

Sample Depth: 0.5'

Project/Site: Harrier 35

Client: Ensolum

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

m-Xylene & p-Xylene

SDG: 03D2024083

# Lab Sample ID: 890-2962-1

Analyzed

09/23/22 21:56

09/23/22 21:56

09/23/22 21:56

09/23/22 21:56

09/23/22 21:56

Matrix: Solid

Dil Fac

1

1

1

1

1

5

		-				••••		-
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/21/22 14:46	09/23/22 21:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			09/21/22 14:46	09/23/22 21:56	1
1,4-Difluorobenzene (Surr)	76		70 - 130			09/21/22 14:46	09/23/22 21:56	1
Method: Total BTEX - Total BTEX	(Calculation							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398		0.00398	mg/Kg			09/26/22 15:03	1
Method: 8015 NM - Diesel Range	Organics (DR							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			50.0	mg/Kg		Toparou	09/19/22 11:13	1
	\$30.0	0	30.0	mg/rtg			03/13/22 11:13	'
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Basoline Range Organics	<50.0	U	50.0	mg/Kg		09/16/22 11:48	09/17/22 07:48	1
GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/16/22 11:48	09/17/22 07:48	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/16/22 11:48	09/17/22 07:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
I-Chlorooctane	106		70 - 130			09/16/22 11:48	09/17/22 07:48	1
p-Terphenyl	104		70 - 130			09/16/22 11:48	09/17/22 07:48	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.4		4.96	mg/Kg			09/21/22 05:35	1
lient Sample ID: BH01A						Lab Sar	nple ID: 890-	2962-2
ate Collected: 09/14/22 09:05								x: Solid
ate Received: 09/14/22 15:00								
ample Depth: 2'								
· · ·								
Method: 8021B - Volatile Organic	-		5	1114	_	Deenser	A	
Analyte		Qualifier	RL	<u>Unit</u>	<u>D</u>	Prepared	Analyzed	Dil Fac
Benzene		U	0.00201	mg/Kg		09/21/22 14:46	09/23/22 22:22	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/21/22 14:46	09/23/22 22:22	1

4-Bromofluorobenzene (Surr)	147	S1+	70 - 130		09/21/22 14:46	09/23/22 22:22	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00402	U	0.00402	mg/Kg	09/21/22 14:46	09/23/22 22:22	1
o-Xylene	<0.00201	U	0.00201	mg/Kg	09/21/22 14:46	09/23/22 22:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg	09/21/22 14:46	09/23/22 22:22	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg	09/21/22 14:46	09/23/22 22:22	1
Toluene	<0.00201	U	0.00201	mg/Kg	09/21/22 14:46	09/23/22 22:22	1
Benzenie	0.00201	0	0.00201	ing/itg	00/21/22 11:10	OO/LO/LE LE.LE	

Eurofins Carlsbad

Released to Imaging: 10/25/2022 3:37:43 PM

# **Client Sample Results**

Job ID: 890-2962-1 SDG: 03D2024083

# Lab Sample ID: 890-2962-2

Matrix: Solid

5

Date Collected: 09/14/22 09:05 Date Received: 09/14/22 15:00

**Client Sample ID: BH01A** 

Project/Site: Harrier 35

Sample Depth: 2'

Client: Ensolum

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	95		70 - 130			09/21/22 14:46	09/23/22 22:22	1
– Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/26/22 15:03	1
– Method: 8015 NM - Diesel Range	Organics (DR)	O) (GC)						
Analyte	- · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/19/22 11:13	1
_ Method: 8015B NM - Diesel Range	organics (D							
Analyte	• · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		09/16/22 11:48	09/17/22 03:30	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		09/16/22 11:48	09/17/22 03:30	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/16/22 11:48	09/17/22 03:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			09/16/22 11:48	09/17/22 03:30	1
o-Terphenyl	101		70 - 130			09/16/22 11:48	09/17/22 03:30	1
_ Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63.7		4.99	mg/Kg		· · ·	09/21/22 05:40	1

## **Surrogate Summary**

Client: Ensolum Project/Site: Harrier 35

Page 23 of 69

#### Job ID: 890-2962-1 SDG: 03D2024083

Prep Type: Total/NA

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
390-2942-A-1-E MS	Matrix Spike	110	74		
890-2942-A-1-F MSD	Matrix Spike Duplicate	120	77		
890-2962-1	BH01	115	76		
890-2962-2	BH01A	147 S1+	95		
-CS 880-35074/1-A	Lab Control Sample	109	64 S1-		
LCSD 880-35074/2-A	Lab Control Sample Dup	131 S1+	79		
MB 880-35074/5-A	Method Blank	93	76		
Surrogate Legend					
BFB = 4-Bromofluorobe	nzene (Surr)				

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
2-1	BH01	106	104	
2-2	BH01A	93	101	
976-A-1-C MS	Matrix Spike	133 S1+	107	
76-A-1-D MSD	Matrix Spike Duplicate	97	94	
0-34675/2-A	Lab Control Sample	125	117	
) 880-34675/3-A	Lab Control Sample Dup	120	111	
80-34675/1-A	Method Blank	135 S1+	145 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

# **QC Sample Results**

Client: Ensolum Project/Site: Harrier 35

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

Lab Samp	le ID: MB	880-35074/5-A

Matrix: Solid Analysis Batch: 35228

						Trop Bator	
MB	MB						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00200	U	0.00200	mg/Kg		09/21/22 14:46	09/23/22 11:43	1
<0.00200	U	0.00200	mg/Kg		09/21/22 14:46	09/23/22 11:43	1
<0.00200	U	0.00200	mg/Kg		09/21/22 14:46	09/23/22 11:43	1
<0.00400	U	0.00400	mg/Kg		09/21/22 14:46	09/23/22 11:43	1
<0.00200	U	0.00200	mg/Kg		09/21/22 14:46	09/23/22 11:43	1
<0.00400	U	0.00400	mg/Kg		09/21/22 14:46	09/23/22 11:43	1
МВ	МВ						
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
93		70 - 130			09/21/22 14:46	09/23/22 11:43	1
76		70 - 130			09/21/22 14:46	09/23/22 11:43	1
	Result           <0.00200	Result         Qualifier           <0.00200	Result         Qualifier         RL           <0.00200	Result         Qualifier         RL         Unit           <0.00200	Result         Qualifier         RL         Unit         D           <0.00200	Result         Qualifier         RL         Unit         D         Prepared           <0.00200	MB         MB           Result         Qualifier         RL         Unit         D         Prepared         Analyzed           <0.00200

#### Lab Sample ID: LCS 880-35074/1-A Matrix: Solid

#### Analysis Batch: 35228

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07093		mg/Kg		71	70 - 130	
Toluene	0.100	0.08035		mg/Kg		80	70 - 130	
Ethylbenzene	0.100	0.07541		mg/Kg		75	70 - 130	
m-Xylene & p-Xylene	0.200	0.1518		mg/Kg		76	70 - 130	
o-Xylene	0.100	0.07510		mg/Kg		75	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	64	S1-	70 - 130

#### Lab Sample ID: LCSD 880-35074/2-A

#### Matrix: Solid

Analysis Batch: 35228							35074		
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09722		mg/Kg		97	70 - 130	31	35
Toluene	0.100	0.09378		mg/Kg		94	70 - 130	15	35
Ethylbenzene	0.100	0.09269		mg/Kg		93	70 - 130	21	35
m-Xylene & p-Xylene	0.200	0.1887		mg/Kg		94	70 - 130	22	35
o-Xylene	0.100	0.09312		mg/Kg		93	70 - 130	21	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

# Lab Sample ID: 890-2942-A-1-E MS

#### Matrix: Solid alveie Ratch: 25000

Analysis Batch: 35228									Prep E	Batch: 35074
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1	0.100	0.02522	F1	mg/Kg		25	70 - 130	
Toluene	<0.00201	U F1	0.100	0.02432	F1	mg/Kg		24	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

# **Client Sample ID: Method Blank**

Job ID: 890-2962-1 SDG: 03D2024083

		Prep Batch	1: 35074	
D	Prepared	Analyzed	Dil Fac	i
_	09/21/22 14:46	09/23/22 11:43	1	
	09/21/22 14:46	09/23/22 11:43	1	÷
	09/21/22 14:46	09/23/22 11:43	1	
	09/21/22 14:46	09/23/22 11:43	1	2
	09/21/22 14:46	09/23/22 11:43	1	
	09/21/22 14:46	09/23/22 11:43	1	
	Prepared	Analyzed	Dil Fac	1
	09/21/22 14:46	09/23/22 11:43	1	
	09/21/22 14:46	09/23/22 11:43	1	
С	lient Sample I	D: Lab Control	Sample	
		Prep Type: 1	otal/NA	
		Prep Batch	n: 35074	
		%Pec		

Prep Batch: 35074							
	%Rec	1					
%Rec	Limits						
71	70 - 130						
80	70 - 130						
75	70 - 130						
76	70 - 130						

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Client: Ensolum

Project/Site: Harrier 35

# **QC Sample Results**

#### Job ID: 890-2962-1 SDG: 03D2024083

Lab Sample ID: 890-2942-A-1-	EMS								Client	Sample ID: Ma	atrix Spike
Matrix: Solid										Prep Type	: Total/NA
Analysis Batch: 35228											tch: 35074
-	Sample	Samp	ole	Spike	MS	MS				%Rec	
Analyte	Result	Quali	fier	Added	Result	Qualifier	Unit	I	D %Rec	Limits	
thylbenzene	<0.00201	U F1		0.100	0.02588	F1	mg/Kg		26	70 - 130	
n-Xylene & p-Xylene	<0.00402	UF1		0.201	0.05207	F1	mg/Kg		26	70 - 130	
-Xylene	<0.00201	U F1		0.100	0.02747	F1	mg/Kg		27	70 - 130	
	MS	MS									
Surrogate	%Recovery	Quali	fier	Limits							
-Bromofluorobenzene (Surr)	110			70 - 130							
,4-Difluorobenzene (Surr)	74			70 - 130							
.ab Sample ID: 890-2942-A-1-I	F MSD							Client	Sample ID:	Matrix Spike	Duplicate
Aatrix: Solid										Prep Type	: Total/NA
Analysis Batch: 35228										Prep Ba	tch: 35074
	Sample	Samp	ole	Spike	MSD	MSD				%Rec	RPD
Analyte	Result	Quali	fier	Added	Result	Qualifier	Unit	I	D %Rec	Limits F	RPD Limit
lenzene	<0.00201	U F1		0.0998	0.02569	F1	mg/Kg		26	70 - 130	2 35
oluene	<0.00201	U F1		0.0998	0.02507	F1	mg/Kg		25	70 - 130	3 35
thylbenzene	<0.00201	U F1		0.0998	0.02505	F1	mg/Kg		25	70 - 130	3 35
n-Xylene & p-Xylene	<0.00402	UF1		0.200	0.05019	F1	mg/Kg		25	70 - 130	4 35
-Xylene	<0.00201	U F1		0.0998	0.02817	F1	mg/Kg		28	70 - 130	3 35
	MSD	MSD									
Surrogate	%Recovery	Quali	fier	Limits							
l-Bromofluorobenzene (Surr)	120			70 - 130							
,4-Difluorobenzene (Surr)	77			70 - 130							
ethod: 8015B NM - Diese _ab Sample ID: MB 880-34675/ Matrix: Solid		<u> </u>							Client Sa		: Total/NA
Analysis Details 04000										Ргер Ва	tch: 34675
Analysis Batch: 34626		мр	MD								
-	Re	MB esult	MB Qualifier		RL	Unit		D	Prepared	Analyzed	Dil Fac
Analysis Batch: 34626 Analyte Gasoline Range Organics			Qualifier		<b>RL</b>	Unit mg/K	g		Prepared 9/16/22 11:48	Analyzed	Dil Fac
Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	<	sult	Qualifier U				-	0	•		Dil Fac
Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<	50.0	Qualifier U		50.0	mg/K	g	0	9/16/22 11:48	09/17/22 03:30	Dil Fac
Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	< < <	<b>esult</b> 50.0 50.0 50.0 <b>MB</b>	Qualifier U U MB		50.0 50.0 50.0	mg/K	g	0	9/16/22 11:48 9/16/22 11:48 9/16/22 11:48	09/17/22 03:30 09/17/22 03:30 09/17/22 03:30	Dil Fac 1 1 1 1 1 1
Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate	< < <	esult 50.0 50.0 50.0 MB very	Qualifier U U MB Qualifier		50.0 50.0 50.0	mg/K	g	0	9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 <b>Prepared</b>	09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 <b>Analyzed</b>	Dil Fac           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1
Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) DII Range Arganics (Over C28-C36) Surrogate I-Chlorooctane	< < <	<b>esult</b> 50.0 50.0 50.0 <b>MB</b>	Qualifier U U U MB Qualifier S1+	<b></b>	50.0 50.0 50.0 <b>ts</b> 130	mg/K	g	0 0 0	9/16/22 11:48 9/16/22 11:48 9/16/22 11:48	09/17/22 03:30 09/17/22 03:30 09/17/22 03:30	$\frac{\text{Dil Fac}}{1}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
nalyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36) Il <b>rogate</b> Chlorooctane Terphenyl	<	esult 50.0 50.0 50.0 MB very 135	Qualifier U U U MB Qualifier S1+	70 - 1	50.0 50.0 50.0 <b>ts</b> 130	mg/K	g	0 0 0 0	9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48	09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30	$\frac{\text{Dil Fac}}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$
nalyte masoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36) Il <b>urrogate</b> -Chlorooctane -Terphenyl ab Sample ID: LCS 880-3467	<	esult 50.0 50.0 50.0 MB very 135	Qualifier U U U MB Qualifier S1+	70 - 1	50.0 50.0 50.0 <b>ts</b> 130	mg/K	g	0 0 0 0	9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48	09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 1D: Lab Contr	$\frac{\text{Dil Fac}}{1}$ $\frac{1}{2}$
Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-3467 Matrix: Solid	<	esult 50.0 50.0 50.0 MB very 135	Qualifier U U U MB Qualifier S1+	70 - 1	50.0 50.0 50.0 <b>ts</b> 130	mg/K	g	0 0 0 0	9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48	09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 1D: Lab Contr Prep Type	Dil Fac       0     1
Analyte Basoline Range Organics GRO)-C6-C10 biesel Range Organics (Over 210-C28) DII Range Organics (Over C28-C36) Burrogate -Chlorooctane -Terphenyl Lab Sample ID: LCS 880-34675	<	esult 50.0 50.0 50.0 MB very 135	Qualifier U U U MB Qualifier S1+	70 - 1	50.0 50.0 50.0 <b>ts</b> (30 (30)	mg/K	g	0 0 0 0	9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48 9/16/22 11:48	09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 09/17/22 03:30 1D: Lab Contr Prep Type	$\frac{\text{Dil Fac}}{1}$ $\frac{1}{2}$

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1086		mg/Kg		109	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1082		mg/Kg		108	70 - 130	
C10-C28)								

Eurofins Carlsbad

# **QC Sample Results**

Client: Ensolum Project/Site: Harrier 35

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

		• (	, , , , ,		,						
Lab Sample ID: LCS 880-34	675/2-A						Client	Sample	ID: Lab Co		-
Matrix: Solid										ype: To	
Analysis Batch: 34626									Fieb	Batch:	34075
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	125		70 - 130								
o-Terphenyl	117		70 - 130								
Lab Sample ID: LCSD 880-3	AC75/2 A					Clie	nt Som		Lab Contro	Some	
Matrix: Solid	4075/ <b>5-</b> A					Cile	ni San	ipie iD.		ype: To	
Analysis Batch: 34626										Batch:	
Analysis Batch. 04020			Spike	LCSD	LCSD				%Rec	Baten.	RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	1081		mg/Kg		108	70 - 130		20
(GRO)-C6-C10						0 0					
Diesel Range Organics (Over			1000	1029		mg/Kg		103	70 - 130	5	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	120		70 - 130								
o-Terphenyl	111		70 - 130								
Lab Sample ID: 890-2976-A-	-1-C MS							Client	Sample ID		
Matrix: Solid										ype: To	
Analysis Batch: 34626										Batch:	34675
	-	Sample	Spike		MS		_	~ -	%Rec		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	838.9		mg/Kg		84	70 - 130		
Diesel Range Organics (Over	<49.9	U	996	1028		mg/Kg		98	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	107	07.	70 - 130								
	107		10-100								
Lab Sample ID: 890-2976-A-	-1-D MSD					С	lient Sa	ample IC	): Matrix Sp	oike Dup	olicate
Matrix: Solid										ype: To	
Analysis Batch: 34626										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	999	809.4		mg/Kg		81	70 - 130	4	20
(GRO)-C6-C10			~~~	o / o -				~~	70 /00		
Diesel Range Organics (Over	<49.9	U	999	910.9		mg/Kg		86	70 - 130	12	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	97		70 - 130								

9/26/2022

Job ID: 890-2962-1

Client: Ensolum

Project/Site: Harrier 35

# **QC Sample Results**

Job ID: 890-2962-1 SDG: 03D2024083

## Method: 300.0 - Anions, Ion Chromatography

_														
Lab Sample ID: MB 880-34666/1-	Α										Client S	ample ID:		
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 34958														
		MB ME												
Analyte		esult Qu	ualifier		RL		Uni		D	Pr	repared	Analy		Dil Fac
Chloride	<	<5.00 U			5.00		mg/	Кg				09/21/22	03:24	1
Lab Sample ID: LCS 880-34666/2	- <b>A</b>								Cli	ent	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 34958														
				Spike		LCS	LCS					%Rec		
Analyte				Added	I	Result	Qualifier	Unit		D	%Rec	Limits		
Chloride				250		255.4		mg/Kg			102	90 _ 110		
Lab Sample ID: LCSD 880-34666	/ <b>3-A</b>							CI	ient S	am	ple ID: I	Lab Contro	ol Sampl	le Dur
Matrix: Solid													Type: S	
Analysis Batch: 34958													.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
				Spike		LCSD	LCSD					%Rec		RPD
Analyte				Added	I	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limi
Chloride				250		251.8		mg/Kg			101	90 _ 110	1	20
Lab Sample ID: 880-19314-A-7-B	MS										Client	Sample IE	): Matrix	Spike
Matrix: Solid													Type: S	
Analysis Batch: 34958														
	Sample	Sample		Spike		MS	MS					%Rec		
Analyte	Result	Qualifie	r	Added	I	Result	Qualifier	Unit		D	%Rec	Limits		
Chloride	31.7			250		281.8		mg/Kg			100	90 - 110		
Lab Sample ID: 880-19314-A-7-C	MSD								Client	t Sa	mple ID	): Matrix S	pike Du	olicate
Matrix: Solid													Type: S	
													.,	
Analysis Batch: 34958				Calka		Men	MSD					%Rec		RPD
Analysis Batch: 34958	Sample	Sample		Spike		WISD	NIGD .					/01100		RPL
Analysis Batch: 34958 Analyte	•	Sample Qualifie		Added	1		Qualifier	Unit		D	%Rec	Limits	RPD	Limi

Eurofins Carlsbad

#### Received by OCD: 10/10/2022 9:42:21 AM

**QC Association Summary** 

Client: Ensolum Project/Site: Harrier 35

5

Job ID: 890-2962-1 SDG: 03D2024083

# **GC VOA**

#### Prep Batch: 35074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2962-1	BH01	Total/NA	Solid	5035	
890-2962-2	BH01A	Total/NA	Solid	5035	
MB 880-35074/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35074/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35074/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2942-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2942-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 35228

090-2942-A-1-1 WOD		Total/NA	Solid	5055		0
Analysis Batch: 35228						Ō
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	9
890-2962-1	BH01	Total/NA	Solid	8021B	35074	
890-2962-2	BH01A	Total/NA	Solid	8021B	35074	
MB 880-35074/5-A	Method Blank	Total/NA	Solid	8021B	35074	
LCS 880-35074/1-A	Lab Control Sample	Total/NA	Solid	8021B	35074	
LCSD 880-35074/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35074	
890-2942-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	35074	
890-2942-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	35074	
Analysis Batch: 35420						13

#### Analysis Batch: 35420

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
890-2962-1	BH01	Total/NA	Solid	Total BTEX	
890-2962-2	BH01A	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 34626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2962-1	BH01	Total/NA	Solid	8015B NM	34675
MB 880-34675/1-A	Method Blank	Total/NA	Solid	8015B NM	34675
LCS 880-34675/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34675
LCSD 880-34675/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34675
890-2976-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34675
890-2976-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34675

#### Analysis Batch: 34628

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-2962-2	BH01A	Total/NA	Solid	8015B NM	34675

#### Prep Batch: 34675

890-2962-1

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2962-1	BH01	Total/NA	Solid	8015NM Prep	
890-2962-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-34675/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34675/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34675/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2976-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2976-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
analysis Batch: 34827					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Eurofins Carlsbad

8015 NM

BH01

Total/NA

Solid

5

Job ID: 890-2962-1 SDG: 03D2024083

### Client: Ensolum Project/Site: Harrier 35

# GC Semi VOA (Continued)

## Analysis Batch: 34827 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2962-2	BH01A	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 34666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-2962-1	BH01	Soluble	Solid	DI Leach	
890-2962-2	BH01A	Soluble	Solid	DI Leach	
MB 880-34666/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34666/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34666/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-19314-A-7-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19314-A-7-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 34958

8
٩
3
Prep Batch
34666 12
34666
34666 13
34666
34666 14
34666
-

Job ID: 890-2962-1 SDG: 03D2024083

### Lab Sample ID: 890-2962-1 Matrix: Solid

Lab Sample ID: 890-2962-2

Matrix: Solid

Date Collected: 09/14/22 08:35 Date Received: 09/14/22 15:00

**Client Sample ID: BH01** 

Client: Ensolum

Project/Site: Harrier 35

	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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 21:56	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35420	09/26/22 15:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			34827	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34675	09/16/22 11:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34626	09/17/22 07:48	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34666	09/16/22 10:42	СН	EET MID
Soluble	Analysis	300.0		1			34958	09/21/22 05:35	СН	EET MID

#### Client Sample ID: BH01A Date Collected: 09/14/22 09:05

Date Received: 09/14/22 15:00

	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	35074	09/21/22 14:46	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35228	09/23/22 22:22	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35420	09/26/22 15:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			34827	09/19/22 11:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34675	09/16/22 11:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34628	09/17/22 03:30	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34666	09/16/22 10:42	СН	EET MID
Soluble	Analysis	300.0		1			34958	09/21/22 05:40	СН	EET MID

#### Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Project/Site: Harrier 35

#### Laboratory: Eurofins Midland

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

hority		rogram	Identification Number	Expiration Date
exas	N	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, b	ut the laboratory is not certif	ied by the governing authority. This list ma	av include analytes for
the agency does not o	fer certification.	,	, , , , , , , , , , , , , , , , , , , ,	, ,
the agency does not o Analysis Method	1 ,	Matrix	Analyte	
the agency does not o	fer certification.	,	, , , , , , , , , , , , , , , , , , , ,	

10

Job ID: 890-2962-1

SDG: 03D2024083

Eurofins Carlsbad

Client: Ensolum Project/Site: Harrier 35 Job ID: 890-2962-1 SDG: 03D2024083

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	E
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID	
300.0	Anions, Ion Chromatography	MCAWW	EET MID	
5035	Closed System Purge and Trap	SW846	EET MID	
8015NM Prep	Microextraction	SW846	EET MID	
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID	
Protocol Refe	rences:			8
ASTM = AS	STM International			
MCAWW =	"Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1	983 And Subsequent Revisions.		S S
SW846 = "	Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition,	November 1986 And Its Updates.		
TAL SOP =	TestAmerica Laboratories, Standard Operating Procedure			

#### Protocol References:

#### Laboratory References:

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

Client: Ensolum Project/Site: Harrier 35 Job ID: 890-2962-1 SDG: 03D2024083

Page 33 of 69

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2962-1	BH01	Solid	09/14/22 08:35	09/14/22 15:00	0.5'
890-2962-2	BH01A	Solid	09/14/22 09:05	09/14/22 15:00	2'

Released to Imaging: 10/25/2022 3:37:43 PM

.

VEILO		Hobbs, N	(575) 392-755	EL 1890, IN 1910, 2002-9449, ELBOACO, IN (675) 988-3199 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	w.w.w.xenco.com	co.com Page of
Project Manager: Joe 6 . 1/4	Bill	Bill to: (if different)	IJoe	c Gubb	Work (	Work Order Comments
	Col	Company Name:	Chiso		Program: UST/PST PRP	Brownfields RRC Superfund
Address:	Ad	Address:	-		State of Project:	
City, State ZIP:	Cit	City, State ZIP:	_		evel II L	
903-366-8073	Email:	1994	JGGARCEDENSULUN.C.	lun.com	Deliverables: EDD	ADaPI L Other:
Project Name: Barrie 35	Jurn Around	nnd		ANAL	ANALYSIS REQUEST	Preservative Codes
umber: 03020240 63	Routine	Ę	Pres. Code			None: NO DI Water: H <sub>2</sub> O
Project Location: 32.0% 77.403.6421 1 Sampler's Name: K456 Proc	Due Date: TAT starts the day received by the lab, if received by 4:30pm	received by 1 by 4:30pm				Cool: Cool MeOH: Me HCL: HC HNO 3: HN H.SO 2: H NOH: Na
SAMPLE RECEIPT Temp Blank: Yer No	Wet Ice:	Yes (ND)	sters			
tact: Key No T	AT		emen			NaHSO 4: NABIS
Cooler Custody Seals: Yes Nor MIA Correction Factor:		-0.3	eq	53		Na 25 203: NaSO 3
Seals: Yes No NA	Reading:	27.6	+	890-296	890-2962 Chain of Custody	Zn Acetate+NaOH: Zn NaOH+Accorbic Acid: SAPC
Total Containers: Containers:	mperature:	L-1	31	914 1 L		
Sample Identification Matrix Date	Time De Sampled De	Depth Comp C	# of Cont	D 1		Sample Comments
Buci 5 Shiding	14/22 0855 03	0.5	N R	A X		L'Eur releaselym
5 9/14/22	0405	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	A R	×		
Total 200.7 / 6010 200.8 / 6020: 8R( Circle Method(s) and Metal(s) to be analyzed	<u>I I I I 88CRA 13PPM Texas 11</u> TCLP / SPLP 6010 : 8R		Sb As Ba	A 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	vi K Se Ag SiO <sub>2</sub> Hg: 1631	Na Sr TI Sn U V Zn /245.1/7470 /7471
Notice. Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and subcontractors and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco, will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. A minimum charge of \$85,00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	ild purchase order fro ssume any responsibil 1 a charge of \$5 for ea	om client company to lity for any losses or e ach sample submittee	• Eurofins Xenco, its <b>xpenses</b> incurred t 1 to Eurofins Xenco	affiliates and subcontractors. It assigns by the client if such losses are due to cirt but not analyzed. These terms will be .	tlated.	
Reinquished by: (signature) Received by	Received by: (Signature)	L	Date/Time	me Relinquished by: (Signature)	by: (Signature) Received by: (Signature)	gnature) Date/Time
man ac Anara	2210		cethutt.	0.57 6		
				2		

9/26/2022

Page 34 of 69

### Login Sample Receipt Checklist

Client: Ensolum

#### Login Number: 2962 List Number: 1 Creator: Stutzman, Amanda

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

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

14

Job Number: 890-2962-1 SDG Number: 03D2024083

#### List Source: Eurofins Carlsbad

### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 2962 List Number: 2 Creator: Rodriguez, Leticia

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

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

Job Number: 890-2962-1 SDG Number: 03D2024083 List Source: Eurofins Midland List Creation: 09/16/22 11:00 AM

14

#### Received by OCD: 10/10/2022 9:42:21 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-3095-1

Laboratory Sample Delivery Group: Lea County NM Client Project/Site: Harrier 35

### For:

Ensolum 2351 W. Northwest Hwy Suite 1203 Dallas, Texas 75220

Attn: Joe Gable

Authorized for release by: 9/30/2022 9:13:00 AM Jessica Kramer, Project Manager (432)704-5440 Jessica.Kramer@et.eurofinsus.com

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

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

LINKS **Review your project** results through EOL Have a Question? Ask-The Expert Visit us at: www.eurofinsus.com/Env

Released to Imaging: 10/25/2022 3:37:43 PM

Laboratory Job ID: 890-3095-1 SDG: Lea County NM

# Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	9
QC Sample Results	10
	14
Lab Chronicle	16
Certification Summary	18
Method Summary	19
Sample Summary	20
Chain of Custody	21
-	22

Page 39 of 69

	Definitions/Glossary	
Client: Ensolur Project/Site: Ha		90-3095-1 County NM
Qualifiers		
GC VOA		
Qualifier	Qualifier Description	
F1 F2	MS and/or MSD recovery exceeds control limits. MS/MSD RPD exceeds control limits	
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		
Qualifier U	Qualifier Description	
	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	<u> </u>
¤	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 DER	Contains No Free Liquid	
DER Dil Fac	Duplicate Error Ratio (normalized absolute difference) Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL PRES	Practical Quantitation Limit Prosumetive	
FRED	Presumptive	

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

QC

RER

RPD

TEF

TEQ

TNTC

RL

4

5

#### Job ID: 890-3095-1 SDG: Lea County NM

#### Job ID: 890-3095-1

Client: Ensolum Project/Site: Harrier 35

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-3095-1

#### Receipt

The samples were received on 9/28/2022 8:29 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-3095-A-1-F MS). 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.

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00201 U F2 F1

<0.00201 U F2 F1

<0.00201 U F2 F1

<0.00402 U F2 F1

<0.00201 U F2 F1

<0.00402 U F2 F1

121

95

Qualifier

%Recovery

RL

0.00201

0.00201

0.00201

0.00402

0.00201

0.00402

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

09/28/22 16:20

09/28/22 16:20

09/28/22 16:20

09/28/22 16:20

09/28/22 16:20

09/28/22 16:20

Prepared

09/28/22 16:20

09/28/22 16:20

Page 41 of 69

Job ID: 890-3095-1 SDG: Lea County NM

#### **Client Sample ID: SS01**

Date Collected: 09/27/22 14:35 Date Received: 09/28/22 08:29

Sample Depth: 0.5

Project/Site: Harrier 35

Client: Ensolum

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

#### Lab Sample ID: 890-3095-1 Matrix: Solid

Analyzed

09/30/22 05:47

09/30/22 05:47

09/30/22 05:47

09/30/22 05:47

09/30/22 05:47

09/30/22 05:47

Analyzed

09/30/22 05:47

09/30/22 05:47

5 Dil Fac

1

1

1

1

1

1

Dil Fac

Dil Fac	
1	
Dil Fac	13
1	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/30/22 09:32	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/30/22 08:56	
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 12:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 12:34	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 12:34	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	87		70 - 130			09/29/22 08:25	09/29/22 12:34	1
o-Terphenyl	86		70 - 130			09/29/22 08:25	09/29/22 12:34	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.5		5.02	mg/Kg			09/29/22 15:10	1
lient Sample ID: SS02						Lab Sar	nple ID: 890-	3095-2
ate Collected: 09/27/22 14:40							-	x: Solid

Sample Depth: 0.5

Method: 8021B - Volatile Orga	nic Compounds (	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		09/28/22 16:20	09/30/22 06:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/28/22 16:20	09/30/22 06:08	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/28/22 16:20	09/30/22 06:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/28/22 16:20	09/30/22 06:08	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/28/22 16:20	09/30/22 06:08	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/28/22 16:20	09/30/22 06:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			09/28/22 16:20	09/30/22 06:08	1

**Eurofins Carlsbad** 

Released to Imaging: 10/25/2022 3:37:43 PM

#### **Client Sample Results**

Job ID: 890-3095-1 SDG: Lea County NM

Lab Sample ID: 890-3095-2

Analyzed

09/30/22 08:56

Analyzod

Lab Sample ID: 890-3095-3

Matrix: Solid

**Client Sample ID: SS02** 

Client: Ensolum Project/Site: Harrier 35

Date Collected: 09/27/22 14:40							Matri	ix: Solid
Date Received: 09/28/22 08:29								
Sample Depth: 0.5								
Method: 8021B - Volatile Orga	anic Compounds (	GC) (Conti	nued)					
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104		70 - 130			09/28/22 16:20	09/30/22 06:08	1
Method: Total BTEX - Total B	TEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/30/22 09:32	1

n

Droparod

Unit

Method: 8015 NM - Diesel Range C	Organics (DR	O) (GC)				
Analyte	Result	Qualifier	RL	Unit	D	Prepared
Total TPH	<49.9	U	49.9	mg/Kg		

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC) RI Result Qualifier **Analyte**

Analyte	Result	Quaimer	RL	Unit	U	Frepareu	Analyzeu	DIFAC
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		09/29/22 08:25	09/29/22 12:55	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		09/29/22 08:25	09/29/22 12:55	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/29/22 08:25	09/29/22 12:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			09/29/22 08:25	09/29/22 12:55	1

Method: 300.0 - Anions, Ion Chron	hatography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.8	4.99	mg/Kg			09/29/22 15:15	1

#### **Client Sample ID: SS03**

Date Collected: 09/27/22 14:45 Date Received: 09/28/22 08:29 Sample Depth: 0.5

#### Method: 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene <0.00199 U 0.00199 mg/Kg 09/28/22 16:20 09/30/22 06:28 Toluene <0.00199 U 0.00199 09/28/22 16:20 09/30/22 06:28 mg/Kg 1 Ethylbenzene <0.00199 U 0.00199 mg/Kg 09/28/22 16:20 09/30/22 06:28 09/30/22 06:28 m-Xylene & p-Xylene <0.00398 U 0.00398 09/28/22 16:20 mg/Kg 1 o-Xylene <0.00199 U 0.00199 mg/Kg 09/28/22 16:20 09/30/22 06:28 Xylenes, Total <0.00398 U 0.00398 mg/Kg 09/28/22 16:20 09/30/22 06:28 1 %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analvzed 105 70 - 130 09/28/22 16:20 4-Bromofluorobenzene (Surr) 09/30/22 06:28 1 1,4-Difluorobenzene (Surr) 103 70 - 130 09/28/22 16:20 09/30/22 06:28 1 Method: Total BTEX - Total BTEX Calculation Analyte RL D Dil Fac Result Qualifier Unit Prepared Analyzed Total BTEX <0.00398 U 0.00398 09/30/22 09:32 mg/Kg 1 Method: 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac <50.0 U Total TPH 50.0 mg/Kg 09/30/22 08:56 1

Dil Fac

Dil Fac

#### **Client Sample Results**

Job ID: 890-3095-1 SDG: Lea County NM

Matrix: Solid

Lab Sample ID: 890-3095-3

Lab Sample ID: 890-3095-4

Matrix: Solid

#### Client Sample ID: SS03

Date Collected: 09/27/22 14:45 Date Received: 09/28/22 08:29

Sample Depth: 0.5

Project/Site: Harrier 35

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 13:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 13:17	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 13:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			09/29/22 08:25	09/29/22 13:17	1
o-Terphenyl	88		70 - 130			09/29/22 08:25	09/29/22 13:17	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

# AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FacChloride22.34.98mg/Kg09/29/22 15:201

#### Client Sample ID: SS04

#### Date Collected: 09/27/22 14:50 Date Received: 09/28/22 08:29

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/28/22 16:20	09/30/22 06:48	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/28/22 16:20	09/30/22 06:48	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/28/22 16:20	09/30/22 06:48	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/28/22 16:20	09/30/22 06:48	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/28/22 16:20	09/30/22 06:48	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/28/22 16:20	09/30/22 06:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			09/28/22 16:20	09/30/22 06:48	1
1,4-Difluorobenzene (Surr)	112		70 - 130			09/28/22 16:20	09/30/22 06:48	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/30/22 09:32	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/30/22 08:56	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 13:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 13:38	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 13:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			09/29/22 08:25	09/29/22 13:38	1
o-Terphenyl	83		70 - 130			09/29/22 08:25	09/29/22 13:38	

		Client	Sample Res	sults					
Client: Ensolum Project/Site: Harrier 35							Job ID: 890 SDG: Lea Cor		2
Client Sample ID: SS04 Date Collected: 09/27/22 14:50						Lab Sa	mple ID: 890- Matri	3095-4 ix: Solid	
Date Received: 09/28/22 08:29 Sample Depth: 0.5									4
Method: 300.0 - Anions, Ion Chro Analyte		Soluble Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	168		5.00	mg/Kg		<u> </u>	09/29/22 15:25	1	
									8
									9
									13

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

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3095-1	SS01	121	95
890-3095-1 MS	SS01	43 S1-	118
890-3095-1 MSD	SS01	106	96
890-3095-2	SS02	100	104
890-3095-3	SS03	105	103
890-3095-4	SS04	102	112
LCS 880-35626/1-A	Lab Control Sample	103	99
LCSD 880-35626/2-A	Lab Control Sample Dup	102	101
MB 880-35607/5-A	Method Blank	104	112
MB 880-35626/5-A	Method Blank	103	111

#### BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

_	

				Percent Surrogate Re
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-19787-A-1-F MS	Matrix Spike	92	92	
880-19787-A-1-G MSD	Matrix Spike Duplicate	96	91	
890-3095-1	SS01	87	86	
890-3095-2	SS02	89	88	
890-3095-3	SS03	87	88	
890-3095-4	SS04	87	83	
LCS 880-35651/2-A	Lab Control Sample	102	105	
LCSD 880-35651/3-A	Lab Control Sample Dup	102	104	
MB 880-35651/1-A	Method Blank	116	117	

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Prep Type: Total/NA

Client: Ensolum

### **QC Sample Results**

5

Job ID: 890-3095-1 SDG: Lea County NM

Project/Site: Harrier 35

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3560								Cilei	n Sa	mple ID: Meth	
Matrix: Solid										Prep Type:	
Analysis Batch: 35713	MD	MD								Prep Batc	n: 35607
Analuta	MB	MB Qualifier	RL		Unit		D	Bronord	. d	Apolyzod	
Analyte Benzene	<u></u> <0.00200		0.00200		0///		_	Prepare 09/29/22 1		Analyzed 09/29/22 17:44	Dil Fac
Toluene	<0.00200		0.00200		mg/ł	-		09/29/22 1		09/29/22 17:44	1
Ethylbenzene	<0.00200		0.00200		-	-		09/29/22 1		09/29/22 17:44	1
			0.00200		mg/ł						
m-Xylene & p-Xylene	<0.00400				mg/ł	-		09/29/22 1		09/29/22 17:44	1
o-Xylene	<0.00200		0.00200		mg/ł	-		09/29/22 1		09/29/22 17:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/ł	Ŋ		09/29/22 1	1:00	09/29/22 17:44	1
	MB	МВ									
Surrogate	%Recovery	Qualifier	Limits					Prepare	ed	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130					09/29/22 1	1:00	09/29/22 17:44	1
1,4-Difluorobenzene (Surr)	112		70 - 130					09/29/22 1	1:00	09/29/22 17:44	1
								0			
Lab Sample ID: MB 880-3562 Matrix: Solid	20/5-A							Clier	1t 5a	mple ID: Mether Prep Type:	
Analysis Batch: 35713											
Analysis Batch. 35715	MB	МВ								Prep Batc	11. 55020
Analyte		Qualifier	RL		Unit		D	Prepare	d	Analyzed	Dil Fac
Benzene	<0.00200		0.00200				-	09/28/22 1		09/30/22 05:19	1
Toluene	<0.00200		0.00200		-	-		09/28/22 1		09/30/22 05:19	1
Ethylbenzene	<0.00200		0.00200		mg/ł	-		09/28/22 1		09/30/22 05:19	1
					mg/ł						ا 1
m-Xylene & p-Xylene	<0.00400		0.00400 0.00200		mg/ł	-		09/28/22 1		09/30/22 05:19	1
o-Xylene	<0.00200		0.00200		mg/ł	-		09/28/22 1 09/28/22 1		09/30/22 05:19	1
Xylenes, Total	<0.00400	0	0.00400		mg/ł	Ŋ		09/20/22 1	0.20	09/30/22 05:19	1
	MB	МВ									
Surrogate	%Recovery	Qualifier	Limits					Prepare	ed	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130					09/28/22 1	6:20	09/30/22 05:19	1
1,4-Difluorobenzene (Surr)	111		70 - 130					09/28/22 1	6:20	09/30/22 05:19	1
Lab Sample ID: LCS 880-356	326/1-A						С	lient Sam	inle l	D: Lab Contro	I Sample
Matrix: Solid										Prep Type:	
Analysis Batch: 35713										Prep Batc	
			Spike	LCS	LCS					%Rec	
Analyte			Added		Qualifier	Unit		D %Re	C	Limits	
Benzene			0.100	0.09872		mg/Kg			99	70 - 130	
Toluene			0.100	0.1126		mg/Kg		11		70 - 130	
Ethylbenzene			0.100	0.1131		mg/Kg		11		70 - 130	
m-Xylene & p-Xylene			0.200	0.2308		mg/Kg		11		70 - 130	
o-Xylene			0.100	0.1116		mg/Kg		11		70 - 130	
o xylene			0.100	0.1110		ing/itg			2	10-100	
<b>.</b> .	LCS LCS										
Surrogate		lifier	Limits								
4-Bromofluorobenzene (Surr)	103		70 - 130								
1,4-Difluorobenzene (Surr)	99		70 - 130								
Lab Sample ID: LCSD 880-3	5626/2-A					CI	ient	Sample I	D: La	ab Control San	nple Dup
Matrix: Solid								- T		Prep Type:	
Analysis Batch: 35713										Prep Batc	
-			Spike	LCSD	LCSD					%Rec	RPD
Analyte			Added	Result	Qualifier	Unit		D %Re	C	Limits RP	D Limit

#### **QC Sample Results**

Job ID: 890-3095-1 SDG: Lea County NM

Page 47 of 69

### Project/Site: Harrier 35

Client: Ensolum

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

Lab Sample ID: LCSD 880-3562	6/2-A					Clie	nt Sam	ple ID:	Lab Contro		
Matrix: Solid									Prep 1	Type: To	tal/N/
Analysis Batch: 35713									Prep	Batch:	3562
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Toluene			0.100	0.1086		mg/Kg		109	70 - 130	4	3
Ethylbenzene			0.100	0.1098		mg/Kg		110	70 - 130	3	3
m-Xylene & p-Xylene			0.200	0.2236		mg/Kg		112	70 - 130	3	35
o-Xylene			0.100	0.1087		mg/Kg		109	70 - 130	3	3
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	101		70 - 130								
Lab Sample ID: 890-3095-1 MS									Client Sa	mnle ID:	SSO
Matrix: Solid										Type: To	
Analysis Batch: 35713										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00201	U F2 F1	0.100	0.02533	F1	mg/Kg		25	70 - 130		
Toluene	<0.00201	U F2 F1	0.100	0.02394	F1	mg/Kg		24	70 - 130		
Ethylbenzene	<0.00201	U F2 F1	0.100	0.02792	F1	mg/Kg		28	70 - 130		
m-Xylene & p-Xylene	< 0.00402	U F2 F1	0.200	0.06128	F1	mg/Kg		31	70 - 130		
o-Xylene	<0.00201	U F2 F1	0.100	0.03184	F1	mg/Kg		32	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	43	S1-	70 - 130								
1,4-Difluorobenzene (Surr)	118		70 - 130								
Lab Sample ID: 890-3095-1 MSI	2								Client Sa	mple ID:	SS0'
Matrix: Solid	-									Type: To	
Analysis Batch: 35713										Batch:	

Analysis balch. 557 15									Frep	Datch.	33020
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F2 F1	0.0990	0.05317	F2 F1	mg/Kg		54	70 - 130	71	35
Toluene	<0.00201	U F2 F1	0.0990	0.06123	F2 F1	mg/Kg		62	70 - 130	88	35
Ethylbenzene	<0.00201	U F2 F1	0.0990	0.06654	F2 F1	mg/Kg		67	70 - 130	82	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.198	0.1336	F2 F1	mg/Kg		67	70 - 130	74	35
o-Xylene	<0.00201	U F2 F1	0.0990	0.06951	F2	mg/Kg		70	70 - 130	74	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								

70 - 130

70 - 130

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

106

96

Lab Sample ID: MB 880-35651/1-A Matrix: Solid Analysis Batch: 35639	мв	мв				Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batcl	Fotal/NA
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		09/29/22 08:25	09/29/22 09:45	1
(GRO)-C6-C10								

Eurofins Carlsbad

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Client: Ensolum

Project/Site: Harrier 35

#### **QC Sample Results**

#### Job ID: 890-3095-1 SDG: Lea County NM

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

Lab Sample ID: MB 880-35651/	/1- <b>A</b>								Client S	ample ID: I		
Matrix: Solid										Prep T		
Analysis Batch: 35639	_									Prep	Batch	: 3565
Analyte		MB MB sult Qualifier	RL		Uni	•	D	Dr	epared	Analyz	od	Dil Fa
Diesel Range Organics (Over					mg				9/22 08:25			Dirta
C10-C28)		0.0 0	00.0			i ig		00/20	, <u>22</u> 00.20	00/20/22	00.10	
Oll Range Organics (Over C28-C36)	<5	0.0 U	50.0		mg	Кg		09/29	9/22 08:25	09/29/22 (	09:45	
	1	MB MB										
Surrogate	%Recov	ery Qualifier	Limits					Pr	epared	Analyz	ed	Dil Fa
1-Chlorooctane		116	70 - 130				_	09/29	9/22 08:25	09/29/22	09:45	
p-Terphenyl	î	117	70 - 130					09/29	9/22 08:25	09/29/22	09:45	
Lab Sample ID: LCS 880-35651	1/2-A						Cli	ient	Sample	ID: Lab Co	ontrol S	Sampl
Matrix: Solid									Campio	Prep T		
Analysis Batch: 35639											Batch	
			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics			1000	877.7		mg/Kg			88	70 - 130		
(GRO)-C6-C10			1000	400.5					466	70 100		
Diesel Range Organics (Over C10-C28)			1000	1064		mg/Kg			106	70 - 130		
	LCS L	cs										
Surrogate	%Recovery (	Qualifier	Limits									
			70 - 130									
1-Chlorooctane	102											
	102 105		70 - 130									
p-Terphenyl	105					CI	ient S	Sam	ple ID: L	_ab Contro	l Samr	ole Du
o-Terphenyl Lab Sample ID: LCSD 880-356	105					CI	ient S	Sam	ple ID: L	.ab Contro Prep T	-	
o- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid	105					CI	ient S	Sam	ple ID: L	Prep T	ype: T	otal/N
o- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid	105			LCSD	LCSD	CI	ient S	Sam	ple ID: L	Prep T	-	otal/N : 3565
o- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639	105		70 - 130		LCSD Qualifier	CI Unit	ient S	Sam	ple ID: L %Rec	Prep T Prep	ype: T	otal/N : 3565 RP
o- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics	105		70 - 130 Spike				ient S		-	Prep T Prep %Rec	ype: To Batch	otal/N : 3565 RP Lim
o- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10	105		70 - 130 Spike Added 1000	Result 886.7		<mark>Unit</mark> mg/Kg	ient S		%Rec	Prep T Prep %Rec Limits 70 - 130	Spe: To Batch RPD	otal/N : 3565 RP Lim 2
o- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	105		70 - 130 Spike Added	Result		Unit	ient S		%Rec	Prep T Prep %Rec Limits	Batch	otal/N : 3565 RP <u>Lim</u> 2
o- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	105 <b>51/3-A</b>		70 - 130 Spike Added 1000	Result 886.7		<mark>Unit</mark> mg/Kg	ient S		%Rec	Prep T Prep %Rec Limits 70 - 130	Spe: To Batch RPD	otal/N : 3565 RP <u>Lim</u> 2
p- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	105 51/3-A		70 - 130 Spike Added 1000	Result 886.7		<mark>Unit</mark> mg/Kg	ient S		%Rec	Prep T Prep %Rec Limits 70 - 130	Spe: To Batch RPD	otal/N : 3565 RP Lim 2
p- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	105 51/3-A 		70 - 130 Spike Added 1000 1000 Limits	Result 886.7		<mark>Unit</mark> mg/Kg	ient S		%Rec	Prep T Prep %Rec Limits 70 - 130	Spe: To Batch RPD	otal/N : 3565 RP <u>Lim</u> 2
p- <i>Terphenyl</i> Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	105 51/3-A 		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 886.7		<mark>Unit</mark> mg/Kg	ient S		%Rec	Prep T Prep %Rec Limits 70 - 130	Spe: To Batch RPD	otal/N : 3565 RP Lim 2
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	105 51/3-A 		70 - 130 Spike Added 1000 1000 Limits	Result 886.7		<mark>Unit</mark> mg/Kg	ient S		%Rec	Prep T Prep %Rec Limits 70 - 130	Spe: To Batch RPD	otal/N : 3565 RP <u>Lim</u> 2
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	105 <b>51/3-A</b> <i>LCSD L</i> <i>%Recovery Q</i> 102 104		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 886.7		<mark>Unit</mark> mg/Kg	ient 5		<b>%Rec</b> 89 106	Prep T Prep %Rec Limits 70 - 130	Type: To Batch RPD 1 0	otal/N : 3565 RP Lim 2
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-19787-A-1	105 <b>51/3-A</b> <i>LCSD L</i> <i>%Recovery Q</i> 102 104		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 886.7		<mark>Unit</mark> mg/Kg	ient \$		<b>%Rec</b> 89 106	Prep T Prep %Rec Limits 70 - 130 70 - 130	Type: To Batch RPD 1 0	otal/N : 3565 RP Lim 2
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-19787-A-1 Matrix: Solid	105 <b>51/3-A</b> <i>LCSD L</i> <i>%Recovery Q</i> 102 104		70 - 130  Spike Added 1000 1000  Limits 70 - 130	Result 886.7		<mark>Unit</mark> mg/Kg	ient \$		<b>%Rec</b> 89 106	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T	Type: To Batch RPD 1 0	otal/N : 3565 RP Lim 2 2 2 2 2 2
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-19787-A-1 Matrix: Solid	105 <b>51/3-A</b> <i>LCSD L</i> <i>%Recovery Q</i> 102 104	Qualifier _	70 - 130  Spike Added 1000 1000  Limits 70 - 130	<b>Result</b> 886.7 1065		<mark>Unit</mark> mg/Kg	ient \$		<b>%Rec</b> 89 106	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T	Type: To Batch RPD 1 0 : Matrix Type: To	otal/N : 3565 RP Lim 2 2 2 x Spik otal/N
D-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: 880-19787-A-1 Matrix: Solid Analysis Batch: 35639	105 51/3-A 	Qualifier Sample Qualifier	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added	Result           886.7           1065           MS           Result	Qualifier	Unit	ient \$ 		%Rec 89 106 Client 3	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 8 8 8 9 9 9 9 8 8 9 9 9 9 9 9 9 9 9 9	Type: To Batch RPD 1 0 : Matrix Type: To	otal/N : 3565 RP Lim 2 2 2 x Spik otal/N
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-19787-A-1 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics	105 51/3-A 	Qualifier Sample Qualifier	70 - 130  Spike Added 1000 1000  Limits 70 - 130 70 - 130 70 - 130 Spike	<b>Result</b> 886.7 1065 MS	Qualifier	<mark>Unit</mark> mg/Kg mg/Kg	ient \$ 	<u>D</u> .	%Rec 89 106	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep T Prep T Prep %Rec	Type: To Batch RPD 1 0 : Matrix Type: To	otal/N : 3565 RP Lim 2 2 2 x Spik otal/N
De-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane De-Terphenyl Lab Sample ID: 880-19787-A-1 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	105 51/3-A 	Qualifier Sample Qualifier	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added	Result           886.7           1065           MS           Result	Qualifier	Unit	ient \$ 	<u>D</u> .	%Rec 89 106 Client 3	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 8 8 8 9 9 9 9 8 8 9 9 9 9 9 9 9 9 9 9	Type: To Batch RPD 1 0 : Matrix Type: To	otal/N : 3565 RP Lim 2 2 2 x Spik otal/N
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-19787-A-1 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	105 51/3-A <i>LCSD L</i> %Recovery 0 102 104 -F MS Sample 2 Result 0 <50.0 0	Qualifier Sample Qualifier J	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added         998	Result           886.7           1065           MS           Result           862.5	Qualifier	Unit mg/Kg mg/Kg	ient \$	<u>D</u> .	%Rec 89 106 Client 3 %Rec 85	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T Prep T Prep %Rec Limits 70 - 130	Type: To Batch RPD 1 0 : Matrix Type: To	otal/N : 3565 RP Lim 2 2 2 x Spik otal/N
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 880-19787-A-1 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	105 51/3-A <i>LCSD L</i> <i>%Recovery Q</i> 102 104 -F MS Sample S <u>Result Q</u> <50.0 U	Qualifier Sample Qualifier J J	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added         998	Result           886.7           1065           MS           Result           862.5	Qualifier	Unit mg/Kg mg/Kg	ient \$	<u>D</u> .	%Rec 89 106 Client 3 %Rec 85	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T Prep T Prep %Rec Limits 70 - 130	Type: To Batch RPD 1 0 : Matrix Type: To	otal/NJ : 3565 RPI Lim 2 2 2 x Spik
o-Terphenyl Lab Sample ID: LCSD 880-356 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-19787-A-1 Matrix: Solid Analysis Batch: 35639 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	105 51/3-A <i>LCSD L</i> <i>%Recovery Q</i> 102 104 -F MS Sample S <u>Result Q</u> <50.0 U <i>MS M</i>	Qualifier Sample Qualifier J J	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         998         998         998	Result           886.7           1065           MS           Result           862.5	Qualifier	Unit mg/Kg mg/Kg	ient \$	<u>D</u> .	%Rec 89 106 Client 3 %Rec 85	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T Prep T Prep %Rec Limits 70 - 130	Type: To Batch RPD 1 0 : Matrix Type: To	otal/N : 3565 RP Lim 2 2 2 x Spik otal/N

Eurofins Carlsbad

Client: Ensolum

#### **QC Sample Results**

Project/Site: Harrier 35

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

Matrix: Solid	A-1-G MSD							•	ID: Matrix Pre	p Type: To	
Analysis Batch: 35639										rep Batch:	
Analysis Batch. 55059	Sampla	Sample	Spike	MSE	MSD				%Rec	Tep Daten.	RPC
Analuta	•	Qualifier	Added		Qualifier	Unit		D %Re		RPD	Limit
Analyte Gasoline Range Organics			999	892.7					8 70 - 130		20
(GRO)-C6-C10	<50.0	0	999	092.1		mg/Kg		c	0 70-130	5 5	20
Diesel Range Organics (Over	<50.0	U	999	1049	)	mg/Kg		10	3 70 - 130	0 1	20
C10-C28)											
0		MSD	1								
Surrogate 1-Chlorooctane	%Recovery	Qualifier	Limits 70 - 130								
	96		70 - 130 70 - 130								
o-Terphenyl	91		70 - 130								
lethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-356	08/1-A							Clier	nt Sample I	D: Method	I Blani
Matrix: Solid									Pr	ep Type: S	Solubl
Analysis Batch: 35693											
		MB MB									
Analyte	R	esult Qualifier		RL	Unit		D	Prepare	d An	alyzed	Dil Fa
Chloride		<5.00 U		5.00	mg/k	íg			09/29	/22 13:03	
								_			
Lab Sample ID: LCS 880-356	608/2-A						Clie	ent Sam	ple ID: Lab		
Matrix: Solid									Pr	ep Type: S	Soluble
Analysis Batch: 35693											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Resul	Qualifier	Unit		D %Re	c Limits		
						Unit					
Chloride			250	242.7		mg/Kg			90 - 110	)	
-	5608/3-A		250			mg/Kg		ę	90 - 110		le Dur
Lab Sample ID: LCSD 880-3	5608/3-A		250			mg/Kg		ę	90 - 110 D: Lab Con	itrol Samp	
Lab Sample ID: LCSD 880-3 Matrix: Solid	5608/3-A		250			mg/Kg		ę	90 - 110 D: Lab Con		
Lab Sample ID: LCSD 880-3 Matrix: Solid	5608/3-A			242.7		mg/Kg		ę	90 - 110 D: Lab Con Pr	itrol Samp	Soluble
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693	5608/3-A		Spike	242.7 LCSE	LCSD	mg/Kg	ient S	ample I	7 90 - 110 D: Lab Con Pr %Rec	itrol Samp ep Type: S	Soluble
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte	5608/3-A		Spike Added	242.7 LCSE Resul	LCSD Qualifier	mg/Kg Cl	ient S	ample I	90 - 110 D: Lab Con Pr %Rec Limits	ep Type: S	RPE Limi
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693	5608/3-A 		Spike	242.7 LCSE	LCSD Qualifier	mg/Kg	ient S	ample I	7 90 - 110 D: Lab Con Pr %Rec	ep Type: S	RPI Limi
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride			Spike Added	242.7 LCSE Resul	LCSD Qualifier	mg/Kg Cl	ient S	ample I 0 0	90 - 110 90 - 110 <b>D: Lab Con</b> Pr %Rec <u>C</u> <u>Limits</u> 90 - 110	ep Type: S	RPE Limi
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A-			Spike Added	242.7 LCSE Resul	LCSD Qualifier	mg/Kg Cl	ient S	ample I 0 0	7 90 - 110 D: Lab Con Pr %Rec <u>C</u> <u>Limits</u> 90 - 110 ent Sample	ep Type: S <u></u> <u></u> <u></u> <u></u> <u></u> ID: Matrix	RPE Limi 20 C Spike
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid			Spike Added	242.7 LCSE Resul	LCSD Qualifier	mg/Kg Cl	ient S	ample I 0 0	7 90 - 110 D: Lab Con Pr %Rec <u>C</u> <u>Limits</u> 90 - 110 ent Sample	ep Type: S	RPE Limi 20 C Spike
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A-	 1-B MS	Sample	Spike Added 250	242.7 LCSE <u>Resul</u> 243.5	LCSD Qualifier	mg/Kg Cl	ient S	ample I 0 0	7 90 - 110 D: Lab Con Pr %Rec Limits 7 90 - 110 ent Sample Pr	ep Type: S <u></u> <u></u> <u></u> <u></u> <u></u> ID: Matrix	RPE Limi 20 C Spike
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid Analysis Batch: 35693	 1-B MS Sample	Sample	Spike Added 250 Spike	242.7 LCSE <u>Resul</u> 243.5	LCSD Qualifier	Unit mg/Kg	ient S	ample I D %Re Clic	7 90 - 110 D: Lab Con Pr %Rec <u>C</u> Limits 7 90 - 110 ent Sample Pr %Rec	ep Type: S <u></u> <u></u> <u></u> <u></u> <u></u> ID: Matrix	RPE Limi 20 C Spike
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid Analysis Batch: 35693 Analyte	1-B MS Sample Result	Sample Qualifier	Spike Added 250 Spike Added	242.7 LCSE Resul 243.5 MS Resul	LCSD Qualifier MS	Unit Unit Unit	ient S	ample I 0 %Re 9 Clic 0 %Re	90 - 110           90 - 110           D: Lab Con           Pr           %Rec           Limits           7           90 - 110           ent Sample           Pr           %Rec           ent Sample           %Rec           Limits           90 - 110	htrol Samp ep Type: S RPD D ID: Matrix ep Type: S	RPE Limi 20 C Spike
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid Analysis Batch: 35693 Analyte	 1-B MS Sample	-	Spike Added 250 Spike	242.7 LCSE <u>Resul</u> 243.5	LCSD Qualifier MS	Unit mg/Kg	ient S	ample I D %Re Clic	90 - 110           90 - 110           D: Lab Con           Pr           %Rec           Limits           7           90 - 110           ent Sample           Pr           %Rec           Ent Sample           %Rec           Limits           90 - 110           ent Sample           Pr           %Rec           Limits	htrol Samp ep Type: S RPD D ID: Matrix ep Type: S	RPE Limi 20 C Spike
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid Analysis Batch: 35693 Analyte Chloride	1-B MS Sample Result 16.8	-	Spike Added 250 Spike Added	242.7 LCSE Resul 243.5 MS Resul	LCSD Qualifier MS	Unit Mg/Kg	ient S	ample I	90 - 110           90 - 110           D: Lab Con           Pr           %Rec           Limits           7           90 - 110           ent Sample           Pr           %Rec           Ent Sample           %Rec           Limits           90 - 110           ent Sample           Pr           %Rec           Limits	ID: Matrix D: Matrix D: Matrix D: Matrix D: Matrix	RPI Limi 20 Soluble
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A-	1-B MS Sample Result 16.8	-	Spike Added 250 Spike Added	242.7 LCSE Resul 243.5 MS Resul	LCSD Qualifier MS	Unit Mg/Kg	ient S	ample I	7       90 - 110         90 - 110       91         90 - 110       91         90 - 110       92         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110	Itrol Samp         ep Type: S	Soluble RPI Limi 20 Soluble Soluble
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid	1-B MS Sample Result 16.8	-	Spike Added 250 Spike Added	242.7 LCSE Resul 243.5 MS Resul	LCSD Qualifier MS	Unit Mg/Kg	ient S	ample I	7       90 - 110         90 - 110       91         90 - 110       91         90 - 110       92         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110	ID: Matrix D: Matrix D: Matrix D: Matrix D: Matrix	RPE Limi 20 C Spike Soluble
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid	1-B MS Sample <u>Result</u> 16.8 1-C MSD	Qualifier	Spike Added 250 Spike Added 250	242.7 LCSE Resul 243.5 MS Resul 266.4	LCSD Qualifier MS	Unit Mg/Kg	ient S	ample I	7       90 - 110         90 - 110       91         90 - 110       91         90 - 110       92         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110         90 - 110       90 - 110	Itrol Samp         ep Type: S	RPD Limit 20 C Spike Soluble
Lab Sample ID: LCSD 880-3 Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid Analysis Batch: 35693 Analyte Chloride Lab Sample ID: 890-3084-A- Matrix: Solid	1-B MS Sample <u>Result</u> 16.8 1-C MSD Sample	-	Spike Added 250 Spike Added	242.7 LCSE Resul 243.5 MSE 266.4	LCSD Qualifier MS Qualifier	Unit Mg/Kg	ient S	ample I	7         90 - 110           90 - 110         91 - 110           D: Lab Con         Pr           %Rec         Limits           90 - 110         90 - 110           ent Sample         Pr           %Rec         Limits           90 - 110         90 - 110           ent Sample         Pr           %Rec         Limits           90 - 110         Pr           %Rec         Natrix           90 - 110         Pr	Itrol Samp         ep Type: S	C Spike C Spike C Spike C Spike C Soluble

101 90 - 110 2

Released to Imaging: 10/25/2022 3:37:43 PM

#### Received by OCD: 10/10/2022 9:42:21 AM

**QC Association Summary** 

Client: Ensolum Project/Site: Harrier 35 Job ID: 890-3095-1

SDG: Lea County NM

#### GC VOA

#### Prep Batch: 35607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-35607/5-A	Method Blank	Total/NA	Solid	5035	
Prep Batch: 35626					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3095-1	SS01	Total/NA	Solid	5035	
890-3095-2	SS02	Total/NA	Solid	5035	
890-3095-3	SS03	Total/NA	Solid	5035	
890-3095-4	SS04	Total/NA	Solid	5035	
MB 880-35626/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35626/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35626/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3095-1 MS	SS01	Total/NA	Solid	5035	
890-3095-1 MSD	SS01	Total/NA	Solid	5035	

#### Analysis Batch: 35713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3095-1	SS01	Total/NA	Solid	8021B	35626
890-3095-2	SS02	Total/NA	Solid	8021B	35626
890-3095-3	SS03	Total/NA	Solid	8021B	35626
890-3095-4	SS04	Total/NA	Solid	8021B	35626
MB 880-35607/5-A	Method Blank	Total/NA	Solid	8021B	35607
MB 880-35626/5-A	Method Blank	Total/NA	Solid	8021B	35626
LCS 880-35626/1-A	Lab Control Sample	Total/NA	Solid	8021B	35626
LCSD 880-35626/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35626
890-3095-1 MS	SS01	Total/NA	Solid	8021B	35626
890-3095-1 MSD	SS01	Total/NA	Solid	8021B	35626

#### Analysis Batch: 35776

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3095-1	SS01	Total/NA	Solid	Total BTEX	
890-3095-2	SS02	Total/NA	Solid	Total BTEX	
890-3095-3	SS03	Total/NA	Solid	Total BTEX	
890-3095-4	SS04	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 35639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3095-1	SS01	Total/NA	Solid	8015B NM	35651
890-3095-2	SS02	Total/NA	Solid	8015B NM	35651
890-3095-3	SS03	Total/NA	Solid	8015B NM	35651
890-3095-4	SS04	Total/NA	Solid	8015B NM	35651
MB 880-35651/1-A	Method Blank	Total/NA	Solid	8015B NM	35651
LCS 880-35651/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35651
LCSD 880-35651/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35651
880-19787-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	35651
880-19787-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	35651
Prep Batch: 35651					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3095-1	SS01	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

Page 50 of 69

## **QC Association Summary**

Client: Ensolum Project/Site: Harrier 35

#### GC Semi VOA (Continued)

#### Prep Batch: 35651 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-3095-2	SS02	Total/NA	Solid	8015NM Prep	
890-3095-3	SS03	Total/NA	Solid	8015NM Prep	
890-3095-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-35651/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35651/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35651/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-19787-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-19787-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-3095-1	SS01	Total/NA	Solid	8015 NM
890-3095-2	SS02	Total/NA	Solid	8015 NM
890-3095-3	SS03	Total/NA	Solid	8015 NM
890-3095-4	SS04	Total/NA	Solid	8015 NM

#### HPLC/IC

#### Leach Batch: 35608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3095-1	SS01	Soluble	Solid	DI Leach	
390-3095-2	SS02	Soluble	Solid	DI Leach	
390-3095-3	SS03	Soluble	Solid	DI Leach	
890-3095-4	SS04	Soluble	Solid	DI Leach	
MB 880-35608/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-35608/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
_CSD 880-35608/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
390-3084-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3084-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 35693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3095-1	SS01	Soluble	Solid	300.0	35608
890-3095-2	SS02	Soluble	Solid	300.0	35608
890-3095-3	SS03	Soluble	Solid	300.0	35608
890-3095-4	SS04	Soluble	Solid	300.0	35608
MB 880-35608/1-A	Method Blank	Soluble	Solid	300.0	35608
LCS 880-35608/2-A	Lab Control Sample	Soluble	Solid	300.0	35608
LCSD 880-35608/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	35608
890-3084-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	35608
890-3084-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	35608

Page 51 of 69

#### Job ID: 890-3095-1 SDG: Lea County NM

Job ID: 890-3095-1

#### **Client Sample ID: SS01** Date Collected: 09/27/22 14:35

Client: Ensolum

Project/Site: Harrier 35

Date Received: 09/28/22 08:29

	Batch	Batch		Dil	Initial Final	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	35626	09/28/22 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35713	09/30/22 05:47	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35776	09/30/22 09:32	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35757	09/30/22 08:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35651	09/29/22 08:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35639	09/29/22 12:34	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35608	09/28/22 12:49	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35693	09/29/22 15:10	СН	EET MID

#### **Client Sample ID: SS02**

#### Date Collected: 09/27/22 14:40

Date Received: 09/28/22 08:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	35626	09/28/22 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35713	09/30/22 06:08	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35776	09/30/22 09:32	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35757	09/30/22 08:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35651	09/29/22 08:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35639	09/29/22 12:55	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	35608	09/28/22 12:49	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35693	09/29/22 15:15	CH	EET MID

#### **Client Sample ID: SS03**

#### Date Collected: 09/27/22 14:45

Date Received: 09/28/22 08:29

	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	35626	09/28/22 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35713	09/30/22 06:28	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35776	09/30/22 09:32	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35757	09/30/22 08:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35651	09/29/22 08:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35639	09/29/22 13:17	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	35608	09/28/22 12:49	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35693	09/29/22 15:20	CH	EET MID

#### **Client Sample ID: SS04** Date Collected: 09/27/22 14:50 Date Received: 09/28/22 08:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	35626	09/28/22 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35713	09/30/22 06:48	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35776	09/30/22 09:32	AJ	EET MID

**Eurofins Carlsbad** 

Page 52 of 69

SDG: Lea County NM

#### Lab Sample ID: 890-3095-1 Matrix: Solid

5 6 9

#### Lab Sample ID: 890-3095-2 Matrix: Solid

1	3

zed	Analyst	Lab	
6:20	MNR	EET MID	-

Matrix: Solid

Lab Sample ID: 890-3095-3

Lab Sample ID: 890-3095-4

Matrix: Solid

Job ID: 890-3095-1

Matrix: Solid

SDG: Lea County NM

Lab Sample ID: 890-3095-4

#### Lab Chronicle

Client: Ensolum Project/Site: Harrier 35

#### Client Sample ID: SS04

Date Collected: 09/27/22 14:50 Date Received: 09/28/22 08:29

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			35757	09/30/22 08:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	35651	09/29/22 08:25	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35639	09/29/22 13:38	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	35608	09/28/22 12:49	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	35693	09/29/22 15:25	СН	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Project/Site: Harrier 35

#### Laboratory: Eurofins Midland

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

uthority		rogram	Identification Number	Expiration Date
xas	N	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report by	ut the laboratory is not certif	ied by the governing authority. This list ma	av include analytes for
the agency does not o	ffer certification.	·	, , , , ,	.,,,,
• •		Matrix	Analyte	
the agency does not o	ffer certification.	·	, , , , ,	

10

Page 54 of 69

Job ID: 890-3095-1

SDG: Lea County NM

#### **Method Summary**

Client: Ensolum Project/Site: Harrier 35 Job ID: 890-3095-1 SDG: Lea County NM

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
lotal BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
00.0	Anions, Ion Chromatography	MCAWW	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
I Leach	Deionized Water Leaching Procedure	ASTM	EET MID

#### Protocol References:

ASTM = ASTM International

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

, 1

#### Laboratory References:

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

Client: Ensolum Project/Site: Harrier 35

_ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
390-3095-1	SS01	Solid	09/27/22 14:35	09/28/22 08:29	0.5	- 4
390-3095-2	SS02	Solid	09/27/22 14:40	09/28/22 08:29	0.5	
390-3095-3	SS03	Solid	09/27/22 14:45	09/28/22 08:29	0.5	5
390-3095-4	SS04	Solid	09/27/22 14:50	09/28/22 08:29	0.5	
						8
						9
						1
						13

				Hobb	s, NM (	575) 39	Hobbs, NM (575) 392-7550, Carlsbacd, NM (575) 988-3199	Isbad, NM	575) 988-3	199					-	→
						500	240					W	Work Order (		Page	q
Company Name: E	Ensolum			Company Name:		Ensolum	m				Program: UST/PST PRP Brownfields RRC	ST/PST	PRP E	rownfields		Superfund
	3122 National Parks Hwy	s Hwy.		Address:		3122	3122 National Parks Hwy	arks Hwy.			State of Project:	ject:				
e ZIP:	Carlsbad, NM 88220	ŏ		City, State ZIP:		Carlst	Carlsbad, NM 88220	1220			Reporting: Level II CLevel III PST/UST TRRP	evel II 🔲	_evel III	PST/UST		
	903-386-8073		Email:	jgable@ensolum.com and kjennings@ensolum.com	um.co	m and	kjenning:	@ensolu	im.com		Deliverables: EDD	EDD		ADaPT	Other:	
Project Name:	Harrier 35	35	Turn	Turn Around					AN	ANALYSIS REQUEST	JEST			_	Preservative Codes	ive Co
Project Number:	03D2024083	1083	Routine	Rush	Pres.		_							None: NO	NO	DI Water: H <sub>2</sub> O
Project Location:	Lea County, NM	y, NM	Due Date:	USH 24HR TA										Cool: Cool	Cool	MeOH: Me
Sampler's Name:	Liz Cheli	eli	2 1	TAT starts the day received by									_	HCL: HC	Ю	HNO3: HN
PO#	N/A	5	the lab, if rece	the lab, if received by 4:30pm	rs		_				_	_		H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub>	4: H <sub>2</sub>	NaOH: Na
SAMPLE RECEIPT	T Temp Blank:	Yes No	Wet Ice:	Yes No	nete	.0)								H <sub>3</sub> PO	H <sub>3</sub> PO <sub>4</sub> : HP	
Samples Received Intact:		Therm	er ID:	-00-W/	iran	300								NaHS	NaHSO4: NABIS	
Cooler Custody Seals:	Yes No	NA Correction Factor:	-actor:	-0.0	Pa	PA:								Na <sub>2</sub> S	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	
Sample Custody Seals:	Yes No	N/A Temperature Reading:	e Reading:	1.6		S (E			68	890-3095 Chain c	Chain of Cristody	101 101 101 101 101 101		Zn Ac	Zn Acetate+NaOH: Zn	)H: Zn
Total Containers:			Corrected Temperature:			IDE			-		i Cusiody		-	NaOł	NaOH+Ascorbic Acid: SAPC	Acid: S/
Sample Identification	ification Matrix	trix Date Sampled	Time Sampled	Depth Grab/ Comp	# of Cont	CHLOF	TPH (8) BTEX (								Sample Comments	omme
SS01	S	9/27/22	1435	0.5' Comp	-	×	×							Incid	Incident ID:	
SS02		9/27/22	1440		-	×	××							NAP	NAPP2222438377	377
SS03	S	9/27/22	1445		1	×	××									
SS04		9/27/22	1450		-	×	×				_	+		+-		
													_	_		
Total 200.7 / 6010	0 200.8 / 6020:		BRCRA 13PPM	PM Texas 11	A	Sh As	Ba Be	B Cd Ca	Cr Co	Pb	Pb Mg Mn Mo Ni	Nik Se	Ы	Na Sr		V Zn 7471
Notce: 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	ocument and relinquishm	ent of samples cor	stitutes a valid p	ites a valid purchase order from client company to Eurofins Xenco, its affiliates and subcont	1 client o	:ompany	y to Eurofins	Xenco, its a	filiates and	subcontractors. It	assigns stand	ard terms and co	nd condition	¢,		
of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated	will be liable only for the num charge of \$85.00 wi	be applied to eacl	nd shall not assu h project and a ch	me any responsibil arge of \$5 for each	lity for a	ny lossi submit	es or expens ted to Eurofi	es incurred i 15 Xenco, bu	by the client it not analyz	if such losses are ed. These terms w	due to circum ill be enforced	unless prev	ond the cont lously negot	ated.		
Relinquished by	(Signature)	) Receive	Received by: (Signature)	ure)		Date/	Date/Time	Reli	Relinquished by: (S	by: (Signature)	e)	Receive	Received by: (Signature)	nature)	_	Date/Time
- M		1 any	AA7		2	- 20 - 2	ذه	152								
			K					4 0			+				-	

5 6

11 12 13

🔅 eurofins

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

Job Number: 890-3095-1 SDG Number: Lea County NM

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3095 List Number: 1 Creator: Clifton, Cloe

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or ampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
here are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate	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	
here is sufficient vol. for all requested analyses, incl. any requested /IS/MSDs	True	

N/A

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

Job Number: 890-3095-1 SDG Number: Lea County NM

List Source: Eurofins Midland

List Creation: 09/29/22 11:12 AM

#### Login Sample Receipt Checklist

Client: Ensolum

Login Number: 3095 List Number: 2 Creator: Rodriguez, Leticia

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

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



# APPENDIX E

**NMOCD** Notifications

Released to Imaging: 10/25/2022 3:37:43 PM

#### Joe Gable

From: Sent:	Nobui, Jennifer, EMNRD <jennifer.nobui@state.nm.us> Monday, August 29, 2022 10:37 AM</jennifer.nobui@state.nm.us>
То:	Kalei Jennings
Cc:	Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject:	FW: [EXTERNAL] Containment Inspection- Harrier 35 (Incident Number NAPP2222438377)

#### [ \*\*EXTERNAL EMAIL\*\*]

Kalei

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks, Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Monday, August 29, 2022 8:09 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] Containment Inspection- Harrier 35 (Incident Number NAPP2222438377)

From: Kalei Jennings <<u>kjennings@ensolum.com</u>
Sent: Monday, August 29, 2022 7:03 AM
To: Enviro, OCD, EMNRD <<u>OCD.Enviro@state.nm.us</u>
Subject: [EXTERNAL] Containment Inspection- Harrier 35 (Incident Number NAPP2222438377)

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

To Whom It May Concern,

Below is a 48-hour email notification for liner inspection at ConocoPhillips (COP) Harrier 35 (Incident Number NAPP2222438377) / Spill Date 07/12/2022. This is a 48-hour notification that Ensolum is scheduled to inspect this lined containment on behalf of COP on Friday, September 2, 2022, at 8:30 MST. Please call with any questions or concerns.

GPS: 32.08875, -103.6421

Thank you,





# APPENDIX F

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

Page 63 of 69

Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NAPP2222438377
District RP	
Facility ID	
Application ID	

## **Release Notification**

#### **Responsible Party**

Responsible Party COG Operating, LLC	OGRID 229137
Contact Name Charles Beauvais	Contact Telephone 575-988-2043
Contact email Charles.Beauvais@conocophillips.com	Incident # (assigned by OCD)
Contact mailing address 600 West Illinois Avenue, Midland TX 79701	

#### **Location of Release Source**

Latitude <u>32.08875</u>

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Harrier 35 Federal Com #001H	Site Type Production Facility
Date Release Discovered July 12, 2022	API# (if applicable) 30-025-40572

Unit Letter	Section	Township	Range	County
G	35	25S	32E	Lea

Surface Owner: State Federal Tribal Private (Name:

### Nature and Volume of Release

Material	(s) Released (Select all that apply and attach calculations or specific	justification for the volumes provided below)
Crude Oil	Volume Released (bbls) 9.5 bbls	Volume Recovered (bbls) 9 bbls
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by an oil tank overflowing. The release occurred within the lined earthen berm. A vacuum truck was dispatched to remove freestanding fluids. An evaluation will be conducted at the Site to determine if we may commence remediation immediately or delineate any possible impact from the release.

Incident ID

District RP Facility ID Application ID

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

#### **Initial Response**

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

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

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

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

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

If all the actions described above have not been undertaken, explain why:

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

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

	Charles Beauvais	Title: <u>Senior Environmental Engineer</u>
Signature:	Charles R. Beauvais II	Date:08/12/2022
email: <u>Charle</u>	s.Beauvais@conocophillips.com	Telephone: <u>575-988-2043</u>
OCD Only		
Received by:		Date:

	10/110	(20.2.2.4			L	48 Spill Vo	olume Estimate	Form				D (8 6 (0
<b>Received by OCD</b>	: 10/10	Hachity	Name & Aumber:	Harrier 35			and the second second					Page 65 of 69
			Asset Area:	Delaware East								
	Releas	e Disco	very Date & Time:	7/12/22 6:30am								
	_		Release Type:									
Provide a	ny know	n details	s about the event:	well kicked and floo	ded heater treate	er and sent 5f	t of water to oil tank	and the				
					Spil	I Calculation	- On Pad Surface	Pool Spill				
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated <u>Pool</u> Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	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	45.0	8.0	2.00	3	360.000	0.056	3.560	0.003	3.570			
Rectangle B	30.0	8.0	2.00	3	240.000	0.056	2.373	0.003	2.380			
Rectangle C	45.0	8.0	2.00	3	360.000	0.056	3.560	0.003	3.570			
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle E	1		1		0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle J	1				0.000	#DIV/0!	#DIV/0!	#DIV/0	#DIV/0!			
<b>Released to Imag</b>	ing: 10)	/25/202	2 3:37:43 PM				1	otal Volume Release:	9.520			0

Received by OCD: 10/10/2022 9:42:21 AM Form C-141 State of New Mexico

Oil Conservation Division

	<b>Page 66 of 6</b>
Incident ID	NAPP2222438377
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	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?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	🗌 Yes 🔀 No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data

Page 3

- Data table of soil contaminant concentration data
- $\boxtimes$  Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

<b>Received by OCD: 10/10/20</b> Form C-141 Page 4	022 9:42:21 AM State of New Mex Oil Conservation Div		Incident ID District RP Facility ID Application ID	Page 67 of 65 NAPP2222438377
regulations all operators are public health or the environr failed to adequately investig	rmation given above is true and comple required to report and/or file certain rel nent. The acceptance of a C-141 report ate and remediate contamination that po f a C-141 report does not relieve the op s Beauvais	lease notifications and perform c t by the OCD does not relieve th ose a threat to groundwater, surf erator of responsibility for comp	corrective actions for rele e operator of liability sho ace water, human health	ases which may endanger ould their operations have or the environment. In
Signature: Charles R.		Date: <u>10/10/2022</u>	-	
email: <u>Charles.Bea</u>	uvais@conocophillips.com	Telephone:	575-988-2043	
OCD Only Received by: Jocely	n Harimon	Date: <u>10</u> /	10/2022	

Received by OCD: 10/10/2022 9:42:21 AM Form C-141 State of New Mexico

Page 6

Oil Conservation Division

	Page	<u>68</u>	of	69
$\overline{n}$	12027	7		

Incident ID	NAPP2222438377
District RP	
Facility ID	
Application ID	

# Closure

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

<b><u>Closure Report Attachment Checklist</u>:</b> Each of the following item	s must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.11 N	IMAC
Photographs of the remediated site prior to backfill or photos of must be notified 2 days prior to liner inspection)	the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate ODC D	istrict office must be notified 2 days prior to final sampling)
Description of remediation activities	
I hereby certify that the information given above is true and complete to and regulations all operators are required to report and/or file certain re may endanger public health or the environment. The acceptance of a C should their operations have failed to adequately investigate and remed human health or the environment. In addition, OCD acceptance of a C compliance with any other federal, state, or local laws and/or regulation restore, reclaim, and re-vegetate the impacted surface area to the condit accordance with 19.15.29.13 NMAC including notification to the OCE Printed Name: <u>Charles Bea</u> uvais Title: Senior Signature: <u>Charles R. Beauvais 99</u> Da email: <u>Charles.R.Beauvais@conocophillips.com</u>	elease notifications and perform corrective actions for releases which 2-141 report by the OCD does not relieve the operator of liability liate contamination that pose a threat to groundwater, surface water, -141 report does not relieve the operator of responsibility for ns. The responsible party acknowledges they must substantially tions that existed prior to the release or their final land use in 0 when reclamation and re-vegetation are complete.
OCD Only Jocelyn Harimon Received by:	10/10/2022 Date:
	liability should their operations have failed to adequately investigate and er, human health, or the environment nor does not relieve the responsible egulations.
Closure Approved by:	Date: 10/25/2022
Closure Approved by:	Title: Environmental Specialist A

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

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

District III

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

District IV

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

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

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	149788
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Going forward, OCD requires photos of the repaired liner in the closure report.	10/25/2022

CONDITIONS

Action 149788