ENSOLUM

August 21, 2023

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

Re: Closure Request
Red Bull 35 Federal 001H
Incident Number NAPP2317142248
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 assessment, excavation, and soil sampling activities performed at Red Bull 35 Federal 001H (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water at the Site. Based on field observations, excavation activities, and laboratory analytical results from the soil sampling events, COG is submitting this *Closure Request*, describing remediation that has occurred and requesting no further action for Incident Number NAPP2317142248.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit K, Section 35, Township 25 South, Range 33 East, in Lea County, New Mexico (32.0854°, -103.5447°) and is associated with oil and gas exploration and production operations on private land owned by Intrepid Potash.

On June 13, 2023, a pin hole in a poly water transfer line caused a release of approximately 1.95 barrels (bbls) of produced water onto the lease road and into the surrounding pasture. No released fluids were recovered. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on June 20, 2023. The release was assigned Incident Number NAPP2317142248.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On April 18, 2023, a borehole (BH01) was advanced to a depth of 106 feet bgs via hollow stem drill rig. The borehole was located approximately 104 feet northwest of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling of the

borehole. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow the potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 100 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. All wells used 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 3,404 feet southwest 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, or church. The site is greater than 300 feet from a wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture area and lease road that were impacted by the release, per 19.15.29.13 D (1) NMAC for the top 4 feet of areas that will be immediately reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On June 26, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four assessment soil samples (SS01 through SS04) were collected around the release extent at an approximate depth of 0.5 feet bgs to confirm the lateral extent of the release. Three assessment soil samples (SS05 through SS07) were collected within the release extent at an approximate depth of 0.5 feet bgs to assess for the presence or absence of impacted soil. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

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

Laboratory analytical results for assessment soil samples SS01 through SS04, collected around the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for assessment samples SS05 and SS07, collected within the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results for assessment sample SS06, collected within the release extent, indicated chloride concentrations exceeded the reclamation requirement. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix C. Based on the laboratory analytical results, delineation and excavation activities were warranted.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On July 20, 2023, Ensolum personnel returned to the Site to complete vertical assessment activities within the release extent. Boreholes were advanced via hand-auger at the locations of assessment soil samples SS05 and SS07, to further confirm the absence of impacted soil. One discrete delineation soil sample was collected at each location (SS05A and SS07A) from a depth of 1-foot bgs. Two additional boreholes (SS08 and SS09) were advanced within the release extent to further confirm the absence of impacted soil. Two discrete delineation soil samples were collected at each location (SS08/SS08A and SS09/SS094) from depths of 0.5 feet and 1-foot bgs. The delineation soil samples were collected, handled, and analyzed following the same procedures as described above. The boreholes were backfilled with soil removed. The delineation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 2.

Laboratory analytical results for delineation soil samples SS05A and SS07A collected at 1-foot bgs, and delineation soil samples SS08/SS08A and SS09/SS09A collected at 0.5 feet and 1-foot bgs, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the absence of impacted soil is these areas. Based on the laboratory analytical results for assessment soil sample SS06, excavation activities were warranted in the lease road and pasture area near the release point. Laboratory analytical results are summarized in Table 1 and the complete analytical reports are included as Appendix C.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On July 20, 2023, Ensolum personnel were at the Site to oversee excavation of impacted soil in the area around assessment sample SS06. Excavation activities were performed using a backhoe and transport vehicles. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to depths ranging from 0.5 feet to 1-foot bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS04 were collected from the floor of the excavation at depths ranging from 0.5 feet to 1-foot bgs. Due to the shallow depth of the excavation, the sidewalls were incorporated into the floor samples. The soil samples were handled and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS and are presented on Figure 3.

Laboratory analytical results for excavation floor samples FS01 through FS04 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

The final excavation area measured approximately 785 square feet. A total of approximately 29 cubic yards of impacted soil was removed, transported, and properly disposed of at Northern Delaware Basin Landfill in Jal, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the June 13, 2023, release of produced water. Laboratory analytical results for the excavation soil samples indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Additionally, the release was laterally and vertically delineated to the most stringent Table I Closure Criteria. Based on the laboratory analytical results, no further remediation is required.

COG believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, COG respectfully requests closure for Incident Number NAPP2317142248. NMOCD notifications are included in Appendix D and the Final C-141 is included in Appendix E.

If you have any questions or comments, please contact Ms. Hadlie Green at (432) 557-8895 or hgreen@ensolum.com.

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Aimee Cole
Senior Managing Scientist

cc: Jacob Laird, COG Operating, LLC
Intrepid Potash

Appendices:

Figure 1	Site Receptor Map
Figure 2	Assessment Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Notifications
Appendix E	Final C-141

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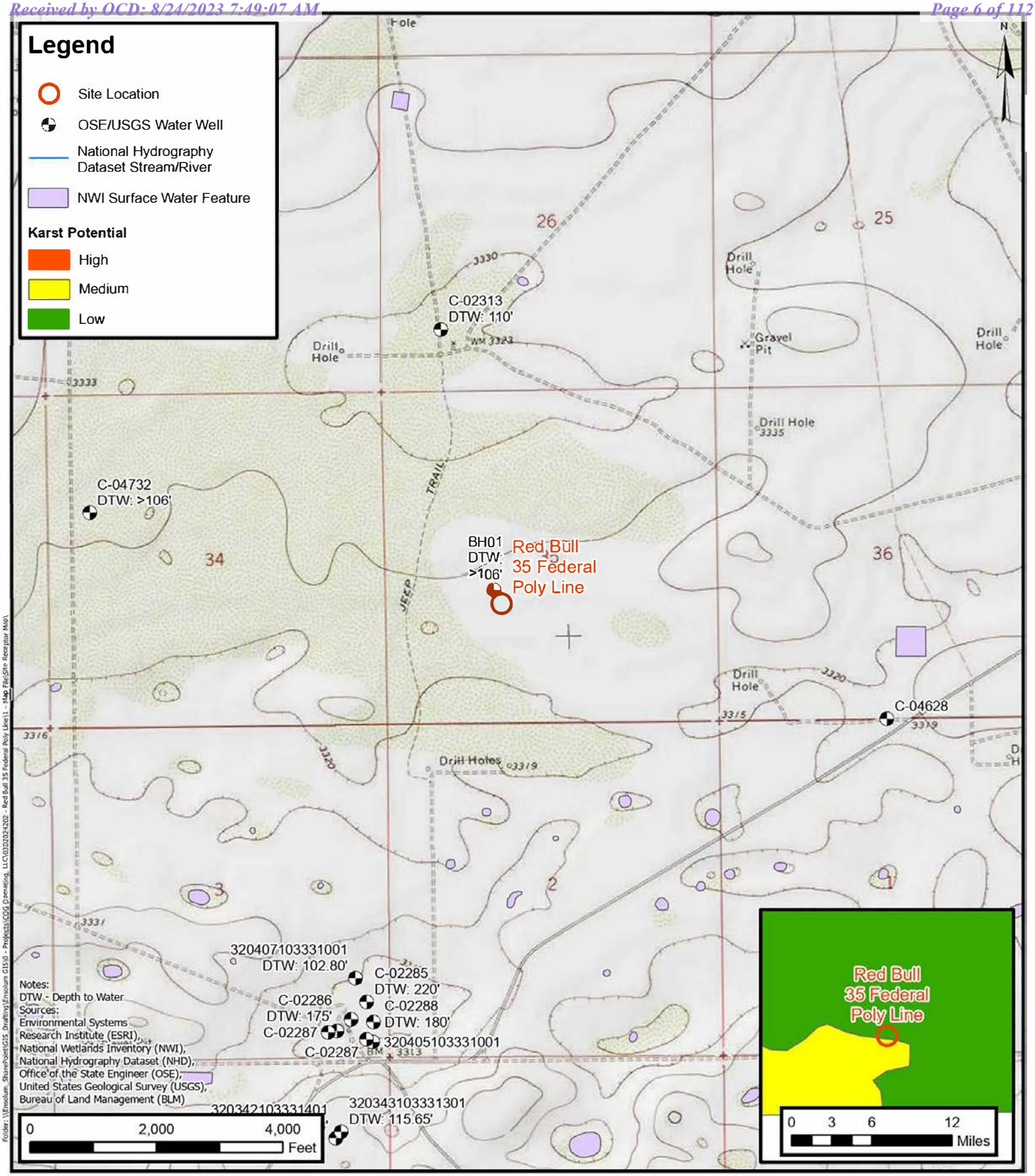
FIGURES



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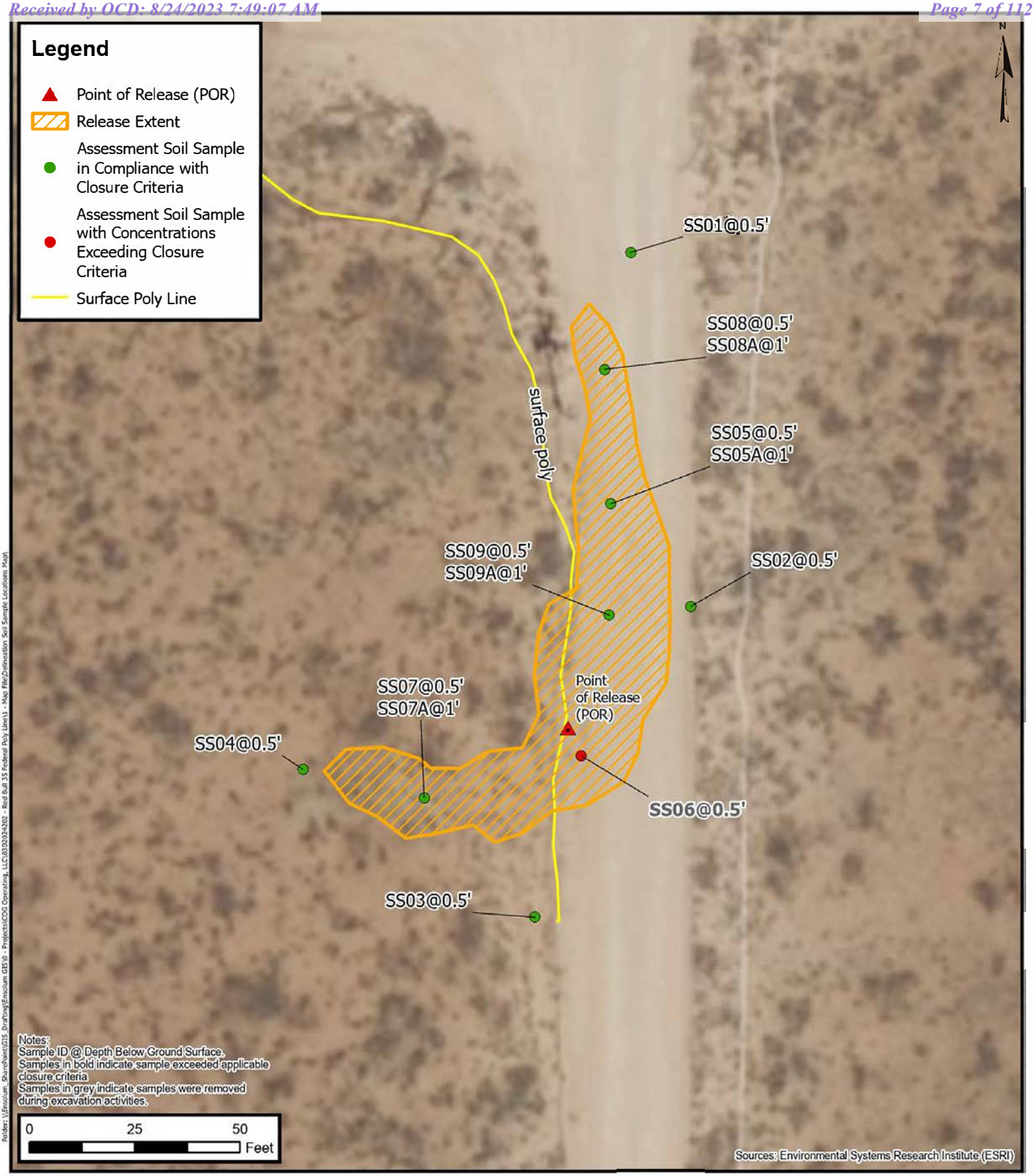
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Red Bull 35 Federal 001H
Incident Number: NAPP2317142248
Unit K, Sec 35, T25S, R33E
Lea County, New Mexico

FIGURE 1



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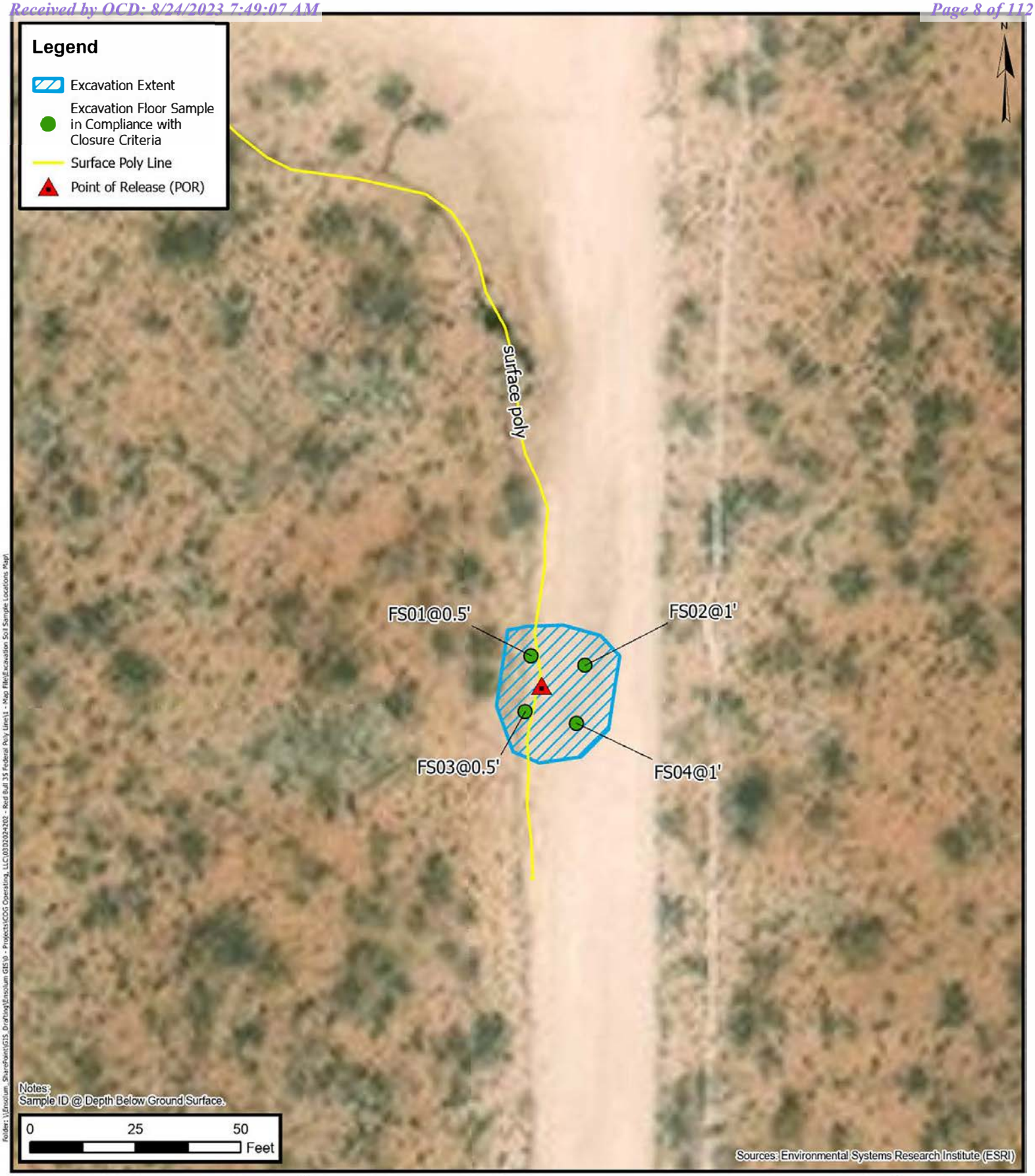
Assessment Soil Sample Locations

COG Operating, LLC
Red Bull 35 Federal 001H
Incident Number: NAPP2317142248
Unit K, Sec 35, T25S, R33E, Lea County, New Mexico

FIGURE 2



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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

COG Operating, LLC
Red Bull 35 Federal 001H
Incident Number: NAPP2317142248
Unit K, Sec 35, T25S, R33E, Lea County, New Mexico

FIGURE 3

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TABLES

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TABLE I
SOIL SAMPLE ANALYTICAL RESULTS
Red Bull 35 Federal 001H
ConocoPhillips Company
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Assessment Soil Samples										
SS01*	06/26/2023	0.5	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	54.9
SS02*	06/26/2023	0.5	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	36.3
SS03*	06/26/2023	0.5	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	51.2
SS04*	06/26/2023	0.5	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	27.3
SS05*	06/26/2023	0.5	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	162
SS05A*	07/20/2023	1	<0.00200	<0.00400	<50.1	<50.1	<50.1	<50.1	<50.1	94.2
SS06*	06/26/2023	0.5	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	**2,610**
SS07*	06/26/2023	0.5	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	93.4
SS07A*	07/20/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	48.0
SS08*	07/20/2023	0.5	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	44.4
SS08A*	07/20/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	209
SS09*	07/20/2023	0.5	<0.00201	<0.00402	<50.3	<50.3	<50.3	<50.3	<50.3	71.7
SS09A*	07/20/2023	1	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	52.4
Excavation Soil Samples										
FS01*	07/20/2023	0.5	<0.00198	<0.00396	<50.4	<50.4	<50.4	<50.4	<50.4	137
FS02*	07/20/2023	1	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	80.2
FS03*	07/20/2023	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	110
FS04*	07/20/2023	1	<0.00200	<0.00401	<50.3	<50.3	<50.3	<50.3	<50.3	69.2

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

Grey text represents samples that have been excavated

** indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard in the top 4 feet is 600 mg/kg for chloride and 100 mg/kg for TPH.*

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APPENDIX A

Referenced Well Records

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	Sample Name: BH01	Date: 04/18/2023
	Site Name: Redbull Federal 35	
	Incident Number: nAPP2126444907	
	Job Number: 03D2024004	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J. Falcomata	Method: Hollow Stem
Coordinates: 32.0848815, -103.5447991	Hole Diameter: 5"	Total Depth: 106'

Comments: Soil boring was advanced to a total depth of 106' bgs. No water was observed within the soil boring after at least 72 hours. On 04/21/2023 the soil boring was plugged and abandoned using hydrated bentonite chips.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
								Note: Driller injected well with a water and soap mixture @ 50' to help stabilize well and prevent cave in. Due to collapse, well cased @ 60' using 2" polypipe casing.
Dry	-	-	N	-	-	10	SP-SC	(10') SAND: fine grained - med grained, trace amounts med sized gravel, poorly graded, tan - yellow brown, no odor, non plastic, non cohesive.
Dry	-	-	N	-	-	20	SP-SM	(20') SAND: fine grained, slightly silty poorly graded, med-reddish brown, no odor, non plastic, non cohesive
Dry	-	-	N	-	-	30	SP-SM	(30') SAND: fine grained, slightly silty, poorly graded, reddish brown - slightly orange, no odor, non plastic, non cohesive.
Dry	-	-	N	-	-	40	SP-SM	(40') SAND: fine grained, slightly silty, poorly graded, orangish brown, no odor, non plastic, non cohesive.
Dry	-	-	N	-	-	50	SP-SM	(50') SAND: fine grained, silty, poorly sorted, orangish brown to medium brown, no odor, non plastic, non cohesive.
Dry	-	-	N	-	-	60	SP-SM	(60') SAND: fine grained, silty, poorly sorted, orangish brown to medium brown, no odor, non plastic, non cohesive.
Wet	-	-	N	-	-	70	SP-SM	(70') SAND: fine grained, silty, poorly graded, medium brown - tan, wet from injection, no odor, non plastic, non cohesive.
Wet	-	-	N	-	-	80	SP-SM	(80') SAND: fine grained, silty, poorly graded, , medium, wet from injection, no odor, non plastic, non cohesive.
Wet	-	-	N	-	-	90	SP-SM	(90') SAND: fine grained, silty, poorly graded, , medium, wet from injection, no odor, non plastic, non cohesive.
Wet	-	-	N	-	-	100	SP-SM	(100') SAND: fine grained, silty, poorly sorted, medium brown - brown, wet from injection, no odor, non plastic, non cohesive.
Wet	-	-	N	-	-	106	SP-SM	AA

Total Depth @ 106 feet bgs

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	C 02313	2	3	3	26	25S	33E	636971	3552098*

Driller License:		**Driller Company:**			
Driller Name:	UNKNOWN				
Drill Start Date:	01/01/1925	**Drill Finish Date:**	06/30/1925	**Plug Date:**	
Log File Date:		**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	60 GPM
Casing Size:	6.88	**Depth Well:**	150 feet	**Depth Water:**	110 feet

***UTM location was derived from PLSS - see Help**

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APPENDIX B

Photographic Log

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Photographic Log
COG Operating, LLC
Red Bull 35 Federal 001H
Incident Number NAPP2317142248

Photograph: 1 Date: 6/13/2023
Description: Soil staining in release footprint
View: Northeast

Photograph: 2 Date: 6/26/2023
Description: Initial assessment activities
View: Northeast

Photograph: 3 Date: 7/20/2023
Description: Delineation activities
View: South

Photograph: 4 Date: 7/20/2023
Description: Excavation activities
View: Northwest

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

Redbull 35 Fed 1 Polyline
SDG NUMBER 03D2024202

JOB NUMBER

890-4875-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

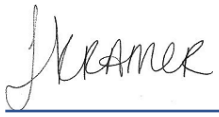
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Laboratory Job ID: 890-4875-1
SDG: 03D2024202

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Job ID: 890-4875-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4875-1

Receipt
The samples were received on 6/28/2023 9:16 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 0.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS05 (890-4875-1), SS06 (890-4875-2) and SS07 (890-4875-3).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-4857-A-6-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-56630 and analytical batch 880-56626 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The laboratory control sample (LCS) for preparation batch 880-56630 and analytical batch 880-56626 recovered outside control limits for the following analytes: Benzene. Since only an acceptable LCS or LCSD is required per the method, the LCSD shows recovery for the batch; therefore, the data have been reported.

Method 8021B: The laboratory control sample duplicate (LCSD) associated with preparation batch 880-56653 and analytical batch 880-56652 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-56819 and analytical batch 880-56814 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike (MS) recoveries for preparation batch 880-56819 and analytical batch 880-56814 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-56551 and analytical batch 880-56693 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Client Sample ID: SS05

Date Collected: 06/26/23 10:20
Date Received: 06/28/23 09:16
Sample Depth: 0.5

Lab Sample ID: 890-4875-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:24	1
Toluene	<0.00198	U	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:24	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:24	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/29/23 14:56	06/30/23 11:24	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:24	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		06/29/23 14:56	06/30/23 11:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*06/29/23 14:56*	*06/30/23 11:24*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*06/29/23 14:56*	*06/30/23 11:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/03/23 15:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 02:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 02:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 02:18	1
Total TPH	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*07/02/23 11:21*	*07/03/23 02:18*	*1*
o-Terphenyl	*76*		*70 - 130*	*07/02/23 11:21*	*07/03/23 02:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**162**		5.00		mg/Kg			06/30/23 16:52	1

Client Sample ID: SS06

Date Collected: 06/26/23 10:25
Date Received: 06/28/23 09:16
Sample Depth: 0.5

Lab Sample ID: 890-4875-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:45	1
Toluene	<0.00198	U	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:45	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:45	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		06/29/23 14:56	06/30/23 11:45	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/29/23 14:56	06/30/23 11:45	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		06/29/23 14:56	06/30/23 11:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*06/29/23 14:56*	*06/30/23 11:45*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*06/29/23 14:56*	*06/30/23 11:45*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Client Sample ID: SS06

Date Collected: 06/26/23 10:25
Date Received: 06/28/23 09:16
Sample Depth: 0.5

Lab Sample ID: 890-4875-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/03/23 16:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/03/23 08:20	07/03/23 10:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U F1	50.0		mg/Kg		07/03/23 08:20	07/03/23 10:59	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/03/23 08:20	07/03/23 10:59	1
Total TPH	<50.0	U	50.0		mg/Kg		07/03/23 08:20	07/03/23 10:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*07/03/23 08:20*	*07/03/23 10:59*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/03/23 08:20*	*07/03/23 10:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2610**		25.0		mg/Kg			06/30/23 16:57	5

Client Sample ID: SS07

Date Collected: 06/26/23 10:30
Date Received: 06/28/23 09:16
Sample Depth: 0.5

Lab Sample ID: 890-4875-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		06/30/23 08:28	06/30/23 15:09	1
Toluene	<0.00200	U *+	0.00200		mg/Kg		06/30/23 08:28	06/30/23 15:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 15:09	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/30/23 08:28	06/30/23 15:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 15:09	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/30/23 08:28	06/30/23 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*06/30/23 08:28*	*06/30/23 15:09*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*06/30/23 08:28*	*06/30/23 15:09*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/03/23 16:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/03/23 08:20	07/03/23 12:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/03/23 08:20	07/03/23 12:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/03/23 08:20	07/03/23 12:05	1
Total TPH	<50.0	U	50.0		mg/Kg		07/03/23 08:20	07/03/23 12:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*07/03/23 08:20*	*07/03/23 12:05*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Client Sample ID: SS07
Date Collected: 06/26/23 10:30
Date Received: 06/28/23 09:16
Sample Depth: 0.5

Lab Sample ID: 890-4875-3
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*112*		*70 - 130*	*07/03/23 08:20*	*07/03/23 12:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	93.4		5.03		mg/Kg			06/30/23 17:03	1

Surrogate Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-4857-A-6-C MS	Matrix Spike	104	101
890-4857-A-6-D MSD	Matrix Spike Duplicate	142 S1+	98
890-4875-1	SS05	119	105
890-4875-2	SS06	107	112
890-4875-3	SS07	90	91
890-4875-3 MS	SS07	103	99
890-4875-3 MSD	SS07	117	99
LCS 880-56630/1-A	Lab Control Sample	102	101
LCS 880-56653/1-A	Lab Control Sample	108	103
LCSD 880-56630/2-A	Lab Control Sample Dup	107	93
LCSD 880-56653/2-A	Lab Control Sample Dup	115	99
MB 880-56572/5-A	Method Blank	97	88
MB 880-56630/5-A	Method Blank	99	85
MB 880-56653/5-A	Method Blank	102	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4875-1	SS05	80	76
890-4875-2	SS06	106	93
890-4875-2 MS	SS06	125	98
890-4875-2 MSD	SS06	108	85
890-4875-3	SS07	128	112
890-4876-A-2-E MS	Matrix Spike	88	77
890-4876-A-2-F MSD	Matrix Spike Duplicate	90	78
LCS 880-56778/2-A	Lab Control Sample	108	108
LCS 880-56819/2-A	Lab Control Sample	85	73
LCSD 880-56778/3-A	Lab Control Sample Dup	99	95
LCSD 880-56819/3-A	Lab Control Sample Dup	90	82
MB 880-56778/1-A	Method Blank	90	90
MB 880-56819/1-A	Method Blank	137 S1+	124

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-56572/5-A
Matrix: Solid
Analysis Batch: 56626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56572

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/23 10:49	06/29/23 16:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/23 10:49	06/29/23 16:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/23 10:49	06/29/23 16:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/29/23 10:49	06/29/23 16:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/23 10:49	06/29/23 16:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/29/23 10:49	06/29/23 16:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*06/29/23 10:49*	*06/29/23 16:56*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*06/29/23 10:49*	*06/29/23 16:56*	*1*

Lab Sample ID: MB 880-56630/5-A
Matrix: Solid
Analysis Batch: 56626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56630

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/23 14:56	06/30/23 03:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/23 14:56	06/30/23 03:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/23 14:56	06/30/23 03:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/29/23 14:56	06/30/23 03:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/23 14:56	06/30/23 03:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/29/23 14:56	06/30/23 03:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*06/29/23 14:56*	*06/30/23 03:44*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*06/29/23 14:56*	*06/30/23 03:44*	*1*

Lab Sample ID: LCS 880-56630/1-A
Matrix: Solid
Analysis Batch: 56626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56630

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1315	*+	mg/Kg		131	70 - 130		
Toluene			0.100	0.1282		mg/Kg		128	70 - 130		
Ethylbenzene			0.100	0.1065		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2196		mg/Kg		110	70 - 130		
o-Xylene			0.100	0.1065		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-56630/2-A
Matrix: Solid
Analysis Batch: 56626

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 56630

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1000		mg/Kg		100	70 - 130	27	35

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

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

Lab Sample ID: LCSD 880-56630/2-A
Matrix: Solid
Analysis Batch: 56626

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 56630

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1123		mg/Kg		112	70 - 130	13	35
Ethylbenzene			0.100	0.09949		mg/Kg		99	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2142		mg/Kg		107	70 - 130	2	35
o-Xylene			0.100	0.1034		mg/Kg		103	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-4857-A-6-C MS
Matrix: Solid
Analysis Batch: 56626

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 56630

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U *+	0.0996	0.1157		mg/Kg		116	70 - 130
Toluene	<0.00202	U	0.0996	0.1146		mg/Kg		115	70 - 130
Ethylbenzene	<0.00202	U	0.0996	0.09322		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00404	U F1	0.199	0.1900		mg/Kg		95	70 - 130
o-Xylene	<0.00202	U	0.0996	0.09099		mg/Kg		91	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-4857-A-6-D MSD
Matrix: Solid
Analysis Batch: 56626

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 56630

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+	0.0994	0.1009		mg/Kg		101	70 - 130	14	35
Toluene	<0.00202	U	0.0994	0.1192		mg/Kg		120	70 - 130	4	35
Ethylbenzene	<0.00202	U	0.0994	0.1170		mg/Kg		118	70 - 130	23	35
m-Xylene & p-Xylene	<0.00404	U F1	0.199	0.2606	F1	mg/Kg		131	70 - 130	31	35
o-Xylene	<0.00202	U	0.0994	0.1265		mg/Kg		127	70 - 130	33	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-56653/5-A
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56653

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/30/23 08:28	06/30/23 14:40	1

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QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

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

Lab Sample ID: MB 880-56653/5-A
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56653

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/30/23 08:28	06/30/23 14:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/30/23 08:28*	*06/30/23 14:40*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*06/30/23 08:28*	*06/30/23 14:40*	*1*

Lab Sample ID: LCS 880-56653/1-A
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56653

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1216		mg/Kg		122	70 - 130		
Toluene			0.100	0.1272		mg/Kg		127	70 - 130		
Ethylbenzene			0.100	0.1054		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2141		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1048		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-56653/2-A
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 56653

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1497	*+	mg/Kg		150	70 - 130	21	35
Toluene			0.100	0.1483	*+	mg/Kg		148	70 - 130	15	35
Ethylbenzene			0.100	0.1235		mg/Kg		124	70 - 130	16	35
m-Xylene & p-Xylene			0.200	0.2525		mg/Kg		126	70 - 130	16	35
o-Xylene			0.100	0.1227		mg/Kg		123	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4875-3 MS
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: SS07
Prep Type: Total/NA
Prep Batch: 56653

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U *+	0.0996	0.1253		mg/Kg		126	70 - 130		
Toluene	<0.00200	U *+	0.0996	0.1179		mg/Kg		118	70 - 130		
Ethylbenzene	<0.00200	U	0.0996	0.08871		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1759		mg/Kg		88	70 - 130		
o-Xylene	<0.00200	U	0.0996	0.08955		mg/Kg		90	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

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

Lab Sample ID: 890-4875-3 MS
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: SS07
Prep Type: Total/NA
Prep Batch: 56653

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4875-3 MSD
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: SS07
Prep Type: Total/NA
Prep Batch: 56653

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U *+	0.0994	0.1203		mg/Kg		121	70 - 130	4	35
Toluene	<0.00200	U *+	0.0994	0.1129		mg/Kg		114	70 - 130	4	35
Ethylbenzene	<0.00200	U	0.0994	0.09215		mg/Kg		93	70 - 130	4	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1775		mg/Kg		89	70 - 130	1	35
o-Xylene	<0.00200	U	0.0994	0.09230		mg/Kg		93	70 - 130	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-56778/1-A
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56778

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1
Total TPH	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*90*		*70 - 130*	*07/02/23 11:21*	*07/02/23 22:31*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/02/23 11:21*	*07/02/23 22:31*	*1*

Lab Sample ID: LCS 880-56778/2-A
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56778

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	956.4		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1053		mg/Kg		105	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

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

Lab Sample ID: LCSD 880-56778/3-A
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 56778

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	907.5		mg/Kg		91	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1012		mg/Kg		101	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: 890-4876-A-2-E MS
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 56778

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	941.9		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	884.1		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Lab Sample ID: 890-4876-A-2-F MSD
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 56778

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	955.5		mg/Kg		94	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	901.8		mg/Kg		88	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Lab Sample ID: MB 880-56819/1-A
Matrix: Solid
Analysis Batch: 56814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56819

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/03/23 08:00	07/03/23 08:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/03/23 08:00	07/03/23 08:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/03/23 08:00	07/03/23 08:16	1
Total TPH	<50.0	U	50.0		mg/Kg		07/03/23 08:00	07/03/23 08:16	1

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

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

Lab Sample ID: MB 880-56819/1-A
Matrix: Solid
Analysis Batch: 56814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56819

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130	07/03/23 08:00	07/03/23 08:16	1
o-Terphenyl	124		70 - 130	07/03/23 08:00	07/03/23 08:16	1

Lab Sample ID: LCS 880-56819/2-A
Matrix: Solid
Analysis Batch: 56814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56819

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	901.2		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	824.2		mg/Kg		82	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	73		70 - 130

Lab Sample ID: LCSD 880-56819/3-A
Matrix: Solid
Analysis Batch: 56814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 56819

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	875.3		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	841.2		mg/Kg		84	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-4875-2 MS
Matrix: Solid
Analysis Batch: 56814

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 56819

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1010		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	1353	F1	mg/Kg		131	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	125		70 - 130
o-Terphenyl	98		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

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

Lab Sample ID: 890-4875-2 MSD — **Client Sample ID: SS06**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 56814 — **Prep Batch: 56819**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	886.9		mg/Kg		87	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	997	1171		mg/Kg		113	70 - 130	14	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-56551/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 56693

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/30/23 14:37	1

Lab Sample ID: LCS 880-56551/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 56693

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	245.5		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-56551/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 56693

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.4		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-4873-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 56693

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	724	F1	252	942.7	F1	mg/Kg		87	90 - 110		

Lab Sample ID: 890-4873-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 56693

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	724	F1	252	942.8	F1	mg/Kg		87	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4873-A-11-B MS
Matrix: Solid
Analysis Batch: 56693

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2060		1260	3345		mg/Kg		102	90 - 110

Lab Sample ID: 890-4873-A-11-C MSD
Matrix: Solid
Analysis Batch: 56693

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2060		1260	3347		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

GC VOA

Prep Batch: 56572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-56572/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 56626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-1	SS05	Total/NA	Solid	8021B	56630
890-4875-2	SS06	Total/NA	Solid	8021B	56630
MB 880-56572/5-A	Method Blank	Total/NA	Solid	8021B	56572
MB 880-56630/5-A	Method Blank	Total/NA	Solid	8021B	56630
LCS 880-56630/1-A	Lab Control Sample	Total/NA	Solid	8021B	56630
LCSD 880-56630/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	56630
890-4857-A-6-C MS	Matrix Spike	Total/NA	Solid	8021B	56630
890-4857-A-6-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	56630

Prep Batch: 56630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-1	SS05	Total/NA	Solid	5035	
890-4875-2	SS06	Total/NA	Solid	5035	
MB 880-56630/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-56630/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-56630/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4857-A-6-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4857-A-6-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 56652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-3	SS07	Total/NA	Solid	8021B	56653
MB 880-56653/5-A	Method Blank	Total/NA	Solid	8021B	56653
LCS 880-56653/1-A	Lab Control Sample	Total/NA	Solid	8021B	56653
LCSD 880-56653/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	56653
890-4875-3 MS	SS07	Total/NA	Solid	8021B	56653
890-4875-3 MSD	SS07	Total/NA	Solid	8021B	56653

Prep Batch: 56653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-3	SS07	Total/NA	Solid	5035	
MB 880-56653/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-56653/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-56653/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4875-3 MS	SS07	Total/NA	Solid	5035	
890-4875-3 MSD	SS07	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 56775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-1	SS05	Total/NA	Solid	8015B NM	56778
MB 880-56778/1-A	Method Blank	Total/NA	Solid	8015B NM	56778
LCS 880-56778/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	56778
LCSD 880-56778/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	56778
890-4876-A-2-E MS	Matrix Spike	Total/NA	Solid	8015B NM	56778
890-4876-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	56778

QC Association Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

GC Semi VOA

Prep Batch: 56778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-56778/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-56778/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-56778/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4876-A-2-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4876-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 56814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-2	SS06	Total/NA	Solid	8015B NM	56819
890-4875-3	SS07	Total/NA	Solid	8015B NM	56819
MB 880-56819/1-A	Method Blank	Total/NA	Solid	8015B NM	56819
LCS 880-56819/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	56819
LCSD 880-56819/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	56819
890-4875-2 MS	SS06	Total/NA	Solid	8015B NM	56819
890-4875-2 MSD	SS06	Total/NA	Solid	8015B NM	56819

Prep Batch: 56819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-2	SS06	Total/NA	Solid	8015NM Prep	
890-4875-3	SS07	Total/NA	Solid	8015NM Prep	
MB 880-56819/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-56819/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-56819/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4875-2 MS	SS06	Total/NA	Solid	8015NM Prep	
890-4875-2 MSD	SS06	Total/NA	Solid	8015NM Prep	

Analysis Batch: 56920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-1	SS05	Total/NA	Solid	8015 NM	
890-4875-2	SS06	Total/NA	Solid	8015 NM	
890-4875-3	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 56551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-1	SS05	Soluble	Solid	DI Leach	
890-4875-2	SS06	Soluble	Solid	DI Leach	
890-4875-3	SS07	Soluble	Solid	DI Leach	
MB 880-56551/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-56551/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-56551/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4873-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4873-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-4873-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4873-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 56693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-1	SS05	Soluble	Solid	300.0	56551

QC Association Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

HPLC/IC (Continued)

Analysis Batch: 56693 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4875-2	SS06	Soluble	Solid	300.0	56551
890-4875-3	SS07	Soluble	Solid	300.0	56551
MB 880-56551/1-A	Method Blank	Soluble	Solid	300.0	56551
LCS 880-56551/2-A	Lab Control Sample	Soluble	Solid	300.0	56551
LCSD 880-56551/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	56551
890-4873-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	56551
890-4873-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	56551
890-4873-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	56551
890-4873-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	56551

Lab Chronicle

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Client Sample ID: SS05

Date Collected: 06/26/23 10:20
Date Received: 06/28/23 09:16

Lab Sample ID: 890-4875-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	56630	06/29/23 14:56	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56626	06/30/23 11:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			56920	07/03/23 15:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	56778	07/02/23 11:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56775	07/03/23 02:18	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	56551	06/29/23 09:19	KS	EET MID
Soluble	Analysis	300.0		1			56693	06/30/23 16:52	CH	EET MID

Client Sample ID: SS06

Date Collected: 06/26/23 10:25
Date Received: 06/28/23 09:16

Lab Sample ID: 890-4875-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	56630	06/29/23 14:56	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56626	06/30/23 11:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			56920	07/03/23 16:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	56819	07/03/23 08:20	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56814	07/03/23 10:59	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	56551	06/29/23 09:19	KS	EET MID
Soluble	Analysis	300.0		5			56693	06/30/23 16:57	CH	EET MID

Client Sample ID: SS07

Date Collected: 06/26/23 10:30
Date Received: 06/28/23 09:16

Lab Sample ID: 890-4875-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	56653	06/30/23 08:28	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56652	06/30/23 15:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			56920	07/03/23 16:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	56819	07/03/23 08:20	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56814	07/03/23 12:05	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	56551	06/29/23 09:19	KS	EET MID
Soluble	Analysis	300.0		1			56693	06/30/23 17:03	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4875-1
SDG: 03D2024202

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4875-1	SS05	Solid	06/26/23 10:20	06/28/23 09:16	0.5
890-4875-2	SS06	Solid	06/26/23 10:25	06/28/23 09:16	0.5
890-4875-3	SS07	Solid	06/26/23 10:30	06/28/23 09:16	0.5

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Chain of Custody

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

Work Order No: ______

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	Nate Jennings
Company Name:	Ensolum, LLC	Company Name:	3122 Nat'l Parks Hwy
Address:	3122 Nat'l Parks Hwy	Address:	Carlsbad, NM 88220
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Ensolum, LLC
Phone:		Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	03C2024202	Turn Around	
Project Number:	Redbull 35 Fed 1 Polyline	☒ Routine	☐ Rush
Project Location:	(32.0849, -103.5454)	Due Date:	
Sampler's Name:	Julianna Falcomata	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT

Temp Blank:	Yes (circled) No	Wet Ice:	Yes (circled) No
Samples Received Intact:	Yes (circled) No	Thermometer ID:	TWM007
Cooler Custody Seals:	Yes No N/A (circled)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A (circled)	Temperature Reading:	1.0
Total Containers:		Corrected Temperature:	0.8

ANALYSIS REQUEST — Pres. Code — Parameters: BTEX, TPH, Chloride

890-4875 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	BTEX	TPH	Chloride	Sample Comments
SS05	S	6/28/23	1020	.5'	C	1	X	X	X	
SS06	↓	↓	1025	↓	↓	↓	↓	↓	↓	
SS07	↓	↓	1030	↓	↓	↓	↓	↓	↓	

Preservative Codes

None: NO	DI Water: H_2O
Cool: Cool	MeOH: Me
HCL: HC	HNO_3: HN
H_2SO_4: H_2	NaOH: Na
H_3PO_4: HP	
$NaHSO_4$: NABIS	
$Na_2S_2O_3$: $NaSO_3$	
Zn Acetate+NaOH: Zn	
NaOH+Ascorbic Acid: SAPC	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	6-28-23 914	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4875-1
SDG Number: 03D2024202

Login Number: 4875
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4875-1
SDG Number: 03D2024202

Login Number: 4875
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/29/23 10:42 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

Redbull 35 Fed 1 Polyline
SDG NUMBER 03D2024202

JOB NUMBER

890-4876-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

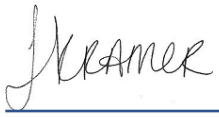
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Laboratory Job ID: 890-4876-1
SDG: 03D2024202

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4876-1
Project/Site: Redbull 35 Fed 1 Polyline SDG: 03D2024202

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Job ID: 890-4876-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4876-1

Receipt
The samples were received on 6/28/2023 9:51 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 0.8°C

GC VOA
Method 8021B: The laboratory control sample duplicate (LCSD) associated with preparation batch 880-56653 and analytical batch 880-56652 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-4873-A-4-B). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-56603 and 880-56603 and analytical batch 880-56748 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS03 (890-4876-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Client Sample ID: SS01

Lab Sample ID: 890-4876-1
Matrix: Solid
Date Collected: 06/26/23 10:00
Date Received: 06/28/23 09:51
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:17	1
Toluene	<0.00202	U *+	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:17	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:17	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/30/23 08:28	06/30/23 16:17	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:17	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/30/23 08:28	06/30/23 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*06/30/23 08:28*	*06/30/23 16:17*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*06/30/23 08:28*	*06/30/23 16:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/03/23 11:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		06/29/23 12:46	07/01/23 16:42	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		06/29/23 12:46	07/01/23 16:42	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		06/29/23 12:46	07/01/23 16:42	1
Total TPH	<50.2	U	50.2		mg/Kg		06/29/23 12:46	07/01/23 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*06/29/23 12:46*	*07/01/23 16:42*	*1*
o-Terphenyl	*100*		*70 - 130*	*06/29/23 12:46*	*07/01/23 16:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**54.9**		5.02		mg/Kg			06/30/23 02:45	1

Client Sample ID: SS02

Lab Sample ID: 890-4876-2
Matrix: Solid
Date Collected: 06/26/23 10:05
Date Received: 06/28/23 09:51
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:37	1
Toluene	<0.00202	U *+	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:37	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:37	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		06/30/23 08:28	06/30/23 16:37	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/30/23 08:28	06/30/23 16:37	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		06/30/23 08:28	06/30/23 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/30/23 08:28*	*06/30/23 16:37*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/30/23 08:28*	*06/30/23 16:37*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Client Sample ID: SS02

Lab Sample ID: 890-4876-2
Matrix: Solid
Date Collected: 06/26/23 10:05
Date Received: 06/28/23 09:51
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/03/23 15:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/02/23 23:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/02/23 23:34	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/02/23 23:34	1
Total TPH	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/02/23 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*07/02/23 11:21*	*07/02/23 23:34*	*1*
o-Terphenyl	*76*		*70 - 130*	*07/02/23 11:21*	*07/02/23 23:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.3**		4.99		mg/Kg			06/30/23 02:51	1

Client Sample ID: SS03

Lab Sample ID: 890-4876-3
Matrix: Solid
Date Collected: 06/26/23 10:10
Date Received: 06/28/23 09:51
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		06/30/23 08:28	06/30/23 16:58	1
Toluene	<0.00198	U *+	0.00198		mg/Kg		06/30/23 08:28	06/30/23 16:58	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/30/23 08:28	06/30/23 16:58	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/30/23 08:28	06/30/23 16:58	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/30/23 08:28	06/30/23 16:58	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		06/30/23 08:28	06/30/23 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*06/30/23 08:28*	*06/30/23 16:58*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*06/30/23 08:28*	*06/30/23 16:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/03/23 15:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 00:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 00:36	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 00:36	1
Total TPH	<49.9	U	49.9		mg/Kg		07/02/23 11:21	07/03/23 00:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*65*	*S1-*	*70 - 130*	*07/02/23 11:21*	*07/03/23 00:36*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Client Sample ID: SS03

Lab Sample ID: 890-4876-3
Matrix: Solid
Date Collected: 06/26/23 10:10
Date Received: 06/28/23 09:51
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*63*	*S1-*	*70 - 130*	*07/02/23 11:21*	*07/03/23 00:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.2**		4.99	mg/Kg			06/30/23 03:08	1

Client Sample ID: SS04

Lab Sample ID: 890-4876-4
Matrix: Solid
Date Collected: 06/26/23 10:15
Date Received: 06/28/23 09:51
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200	mg/Kg		06/30/23 08:28	06/30/23 17:18	1
Toluene	<0.00200	U *+	0.00200	mg/Kg		06/30/23 08:28	06/30/23 17:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/30/23 08:28	06/30/23 17:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		06/30/23 08:28	06/30/23 17:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/30/23 08:28	06/30/23 17:18	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		06/30/23 08:28	06/30/23 17:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/30/23 08:28*	*06/30/23 17:18*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*06/30/23 08:28*	*06/30/23 17:18*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/03/23 15:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/02/23 11:21	07/03/23 00:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/02/23 11:21	07/03/23 00:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/02/23 11:21	07/03/23 00:56	1
Total TPH	<49.9	U	49.9	mg/Kg		07/02/23 11:21	07/03/23 00:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*07/02/23 11:21*	*07/03/23 00:56*	*1*
o-Terphenyl	*86*		*70 - 130*	*07/02/23 11:21*	*07/03/23 00:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.3**		4.95	mg/Kg			06/30/23 03:14	1

Surrogate Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-4875-A-3-C MS	Matrix Spike	103	99
890-4875-A-3-D MSD	Matrix Spike Duplicate	117	99
890-4876-1	SS01	93	87
890-4876-2	SS02	89	102
890-4876-3	SS03	107	106
890-4876-4	SS04	101	107
LCS 880-56653/1-A	Lab Control Sample	108	103
LCSD 880-56653/2-A	Lab Control Sample Dup	115	99
MB 880-56653/5-A	Method Blank	102	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4873-A-4-C MS	Matrix Spike	128	100
890-4873-A-4-D MSD	Matrix Spike Duplicate	118	92
890-4876-1	SS01	123	100
890-4876-2	SS02	81	76
890-4876-2 MS	SS02	88	77
890-4876-2 MSD	SS02	90	78
890-4876-3	SS03	65 S1-	63 S1-
890-4876-4	SS04	88	86
LCS 880-56603/2-A	Lab Control Sample	109	100
LCS 880-56778/2-A	Lab Control Sample	108	108
LCSD 880-56603/3-A	Lab Control Sample Dup	100	93
LCSD 880-56778/3-A	Lab Control Sample Dup	99	95
MB 880-56603/1-A	Method Blank	109	99
MB 880-56778/1-A	Method Blank	90	90

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-56653/5-A
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56653

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/30/23 08:28	06/30/23 14:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/30/23 08:28	06/30/23 14:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/30/23 08:28*	*06/30/23 14:40*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*06/30/23 08:28*	*06/30/23 14:40*	*1*

Lab Sample ID: LCS 880-56653/1-A
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56653

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1216		mg/Kg		122	70 - 130		
Toluene			0.100	0.1272		mg/Kg		127	70 - 130		
Ethylbenzene			0.100	0.1054		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2141		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1048		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-56653/2-A
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 56653

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1497	*+	mg/Kg		150	70 - 130	21	35
Toluene			0.100	0.1483	*+	mg/Kg		148	70 - 130	15	35
Ethylbenzene			0.100	0.1235		mg/Kg		124	70 - 130	16	35
m-Xylene & p-Xylene			0.200	0.2525		mg/Kg		126	70 - 130	16	35
o-Xylene			0.100	0.1227		mg/Kg		123	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4875-A-3-C MS
Matrix: Solid
Analysis Batch: 56652

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 56653

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U *+	0.0996	0.1253		mg/Kg		126	70 - 130		
Toluene	<0.00200	U *+	0.0996	0.1179		mg/Kg		118	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

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

Lab Sample ID: 890-4875-A-3-C MS | **Client Sample ID: Matrix Spike**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 56652 | **Prep Batch: 56653**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0996	0.08871		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1759		mg/Kg		88	70 - 130
o-Xylene	<0.00200	U	0.0996	0.08955		mg/Kg		90	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4875-A-3-D MSD | **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 56652 | **Prep Batch: 56653**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U *+	0.0994	0.1203		mg/Kg		121	70 - 130	4	35
Toluene	<0.00200	U *+	0.0994	0.1129		mg/Kg		114	70 - 130	4	35
Ethylbenzene	<0.00200	U	0.0994	0.09215		mg/Kg		93	70 - 130	4	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1775		mg/Kg		89	70 - 130	1	35
o-Xylene	<0.00200	U	0.0994	0.09230		mg/Kg		93	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-56603/1-A | **Client Sample ID: Method Blank**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 56748 | **Prep Batch: 56603**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/29/23 12:46	07/01/23 10:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/29/23 12:46	07/01/23 10:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/29/23 12:46	07/01/23 10:00	1
Total TPH	<50.0	U	50.0	mg/Kg		06/29/23 12:46	07/01/23 10:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*06/29/23 12:46*	*07/01/23 10:00*	*1*
o-Terphenyl	*99*		*70 - 130*	*06/29/23 12:46*	*07/01/23 10:00*	*1*

Lab Sample ID: LCS 880-56603/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Solid | **Prep Type: Total/NA**
Analysis Batch: 56748 | **Prep Batch: 56603**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1041		mg/Kg		104	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

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

Lab Sample ID: LCS 880-56603/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 56748 — **Prep Batch: 56603**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (Over C10-C28)			1000	1029		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: LCSD 880-56603/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 56748 — **Prep Batch: 56603**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1038		mg/Kg		104	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	1037		mg/Kg		104	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 890-4873-A-4-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 56748 — **Prep Batch: 56603**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F2	1000	1250		mg/Kg		122	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1000	1342	F1	mg/Kg		131	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*128*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: 890-4873-A-4-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 56748 — **Prep Batch: 56603**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F2	1000	971.2	F2	mg/Kg		94	70 - 130	25	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1000	1235		mg/Kg		120	70 - 130	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

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

Lab Sample ID: MB 880-56778/1-A
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56778

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1
Total TPH	<50.0	U	50.0		mg/Kg		07/02/23 11:21	07/02/23 22:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*07/02/23 11:21*	*07/02/23 22:31*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/02/23 11:21*	*07/02/23 22:31*	*1*

Lab Sample ID: LCS 880-56778/2-A
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56778

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	956.4		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1053		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: LCSD 880-56778/3-A
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 56778

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	907.5		mg/Kg		91	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1012		mg/Kg		101	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: 890-4876-2 MS
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: SS02
Prep Type: Total/NA
Prep Batch: 56778

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	941.9		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	884.1		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

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

Lab Sample ID: 890-4876-2 MS
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: SS02
Prep Type: Total/NA
Prep Batch: 56778

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Lab Sample ID: 890-4876-2 MSD
Matrix: Solid
Analysis Batch: 56775

Client Sample ID: SS02
Prep Type: Total/NA
Prep Batch: 56778

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	955.5		mg/Kg		94	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	901.8		mg/Kg		88	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-56624/1-A
Matrix: Solid
Analysis Batch: 56645

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/30/23 00:48	1

Lab Sample ID: LCS 880-56624/2-A
Matrix: Solid
Analysis Batch: 56645

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	246.7		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-56624/3-A
Matrix: Solid
Analysis Batch: 56645

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	247.0		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 880-30171-A-1-B MS
Matrix: Solid
Analysis Batch: 56645

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	507		253	743.8		mg/Kg		94	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-30171-A-1-C MSD
Matrix: Solid
Analysis Batch: 56645

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	507		253	743.3		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

GC VOA

Analysis Batch: 56652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-1	SS01	Total/NA	Solid	8021B	56653
890-4876-2	SS02	Total/NA	Solid	8021B	56653
890-4876-3	SS03	Total/NA	Solid	8021B	56653
890-4876-4	SS04	Total/NA	Solid	8021B	56653
MB 880-56653/5-A	Method Blank	Total/NA	Solid	8021B	56653
LCS 880-56653/1-A	Lab Control Sample	Total/NA	Solid	8021B	56653
LCSD 880-56653/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	56653
890-4875-A-3-C MS	Matrix Spike	Total/NA	Solid	8021B	56653
890-4875-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	56653

Prep Batch: 56653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-1	SS01	Total/NA	Solid	5035	
890-4876-2	SS02	Total/NA	Solid	5035	
890-4876-3	SS03	Total/NA	Solid	5035	
890-4876-4	SS04	Total/NA	Solid	5035	
MB 880-56653/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-56653/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-56653/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4875-A-3-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4875-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 56603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-56603/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-56603/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-56603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4873-A-4-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4873-A-4-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 56748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-1	SS01	Total/NA	Solid	8015B NM	56603
MB 880-56603/1-A	Method Blank	Total/NA	Solid	8015B NM	56603
LCS 880-56603/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	56603
LCSD 880-56603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	56603
890-4873-A-4-C MS	Matrix Spike	Total/NA	Solid	8015B NM	56603
890-4873-A-4-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	56603

Analysis Batch: 56775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-2	SS02	Total/NA	Solid	8015B NM	56778
890-4876-3	SS03	Total/NA	Solid	8015B NM	56778
890-4876-4	SS04	Total/NA	Solid	8015B NM	56778
MB 880-56778/1-A	Method Blank	Total/NA	Solid	8015B NM	56778
LCS 880-56778/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	56778
LCSD 880-56778/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	56778
890-4876-2 MS	SS02	Total/NA	Solid	8015B NM	56778

QC Association Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

GC Semi VOA (Continued)

Analysis Batch: 56775 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-2 MSD	SS02	Total/NA	Solid	8015B NM	56778

Prep Batch: 56778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-2	SS02	Total/NA	Solid	8015NM Prep	
890-4876-3	SS03	Total/NA	Solid	8015NM Prep	
890-4876-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-56778/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-56778/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-56778/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4876-2 MS	SS02	Total/NA	Solid	8015NM Prep	
890-4876-2 MSD	SS02	Total/NA	Solid	8015NM Prep	

Analysis Batch: 56891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-1	SS01	Total/NA	Solid	8015 NM	
890-4876-2	SS02	Total/NA	Solid	8015 NM	
890-4876-3	SS03	Total/NA	Solid	8015 NM	
890-4876-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 56624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-1	SS01	Soluble	Solid	DI Leach	
890-4876-2	SS02	Soluble	Solid	DI Leach	
890-4876-3	SS03	Soluble	Solid	DI Leach	
890-4876-4	SS04	Soluble	Solid	DI Leach	
MB 880-56624/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-56624/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-56624/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-30171-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-30171-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 56645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4876-1	SS01	Soluble	Solid	300.0	56624
890-4876-2	SS02	Soluble	Solid	300.0	56624
890-4876-3	SS03	Soluble	Solid	300.0	56624
890-4876-4	SS04	Soluble	Solid	300.0	56624
MB 880-56624/1-A	Method Blank	Soluble	Solid	300.0	56624
LCS 880-56624/2-A	Lab Control Sample	Soluble	Solid	300.0	56624
LCSD 880-56624/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	56624
880-30171-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	56624
880-30171-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	56624

Lab Chronicle

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Client Sample ID: SS01

Lab Sample ID: 890-4876-1
Matrix: Solid
Date Collected: 06/26/23 10:00
Date Received: 06/28/23 09:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	56653	06/30/23 08:28	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56652	06/30/23 16:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			56891	07/03/23 11:15	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	56603	06/29/23 12:46	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56748	07/01/23 16:42	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	56624	06/29/23 13:26	SMC	EET MID
Soluble	Analysis	300.0		1			56645	06/30/23 02:45	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-4876-2
Matrix: Solid
Date Collected: 06/26/23 10:05
Date Received: 06/28/23 09:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	56653	06/30/23 08:28	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56652	06/30/23 16:37	SM	EET MID
Total/NA	Analysis	8015 NM		1			56891	07/03/23 15:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	56778	07/02/23 11:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56775	07/02/23 23:34	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	56624	06/29/23 13:26	SMC	EET MID
Soluble	Analysis	300.0		1			56645	06/30/23 02:51	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-4876-3
Matrix: Solid
Date Collected: 06/26/23 10:10
Date Received: 06/28/23 09:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	56653	06/30/23 08:28	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56652	06/30/23 16:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			56891	07/03/23 15:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	56778	07/02/23 11:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56775	07/03/23 00:36	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	56624	06/29/23 13:26	SMC	EET MID
Soluble	Analysis	300.0		1			56645	06/30/23 03:08	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-4876-4
Matrix: Solid
Date Collected: 06/26/23 10:15
Date Received: 06/28/23 09:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	56653	06/30/23 08:28	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56652	06/30/23 17:18	SM	EET MID
Total/NA	Analysis	8015 NM		1			56891	07/03/23 15:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	56778	07/02/23 11:21	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56775	07/03/23 00:56	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Client Sample ID: SS04

Date Collected: 06/26/23 10:15
Date Received: 06/28/23 09:51

Lab Sample ID: 890-4876-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	56624	06/29/23 13:26	SMC	EET MID
Soluble	Analysis	300.0		1			56645	06/30/23 03:14	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Redbull 35 Fed 1 Polyline

Job ID: 890-4876-1
SDG: 03D2024202

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4876-1	SS01	Solid	06/26/23 10:00	06/28/23 09:51	0.5
890-4876-2	SS02	Solid	06/26/23 10:05	06/28/23 09:51	0.5
890-4876-3	SS03	Solid	06/26/23 10:10	06/28/23 09:51	0.5
890-4876-4	SS04	Solid	06/26/23 10:15	06/28/23 09:51	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kate Jennings
Company Name:	Ensolum, LLC	Company Name:	3122 Nat'l Parks Hwy
Address:	3122 Nat'l Parks Hwy	Address:	Carlsbad, NM 88220
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Ensolum, LLC
Phone:		Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	03D2024202	Turn Around	
Project Number:	Federal 35 Fed 1 Paying A	☒ Routine ☐ Rush	
Project Location:	(32.0849, -103.5454)	Due Date:	
Sampler's Name:	Juliana Falcomata	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	Thermo07
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.3
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.0
Total Containers:		Corrected Temperature:	0.8

Preservative Codes

None: NO — DI Water: H_2O
Cool: Cool — MeOH: Me
HCL: HC — HNO_3: HN
H_2SO_4: H_2 — NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

890-4876 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	Parameters: TPH	Parameters: Chloride	Sample Comments
SS01	S	6/26/23	1000	.5'	C	1		X	X	X	
SS02			1005								
SS03			1010								
SS04			1015								

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Juliana Falcomata		6.25.23 9:15	4		
5				6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4876-1
SDG Number: 03D2024202

Login Number: 4876
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4876-1
SDG Number: 03D2024202

Login Number: 4876
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/29/23 10:42 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/7/2023 9:14:09 AM

JOB DESCRIPTION

Red Bull Federal 001H
SDG NUMBER 03D2024202

JOB NUMBER

890-4971-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

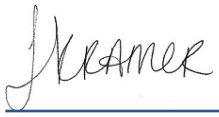
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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

Client: Ensolum
Project/Site: Red Bull Federal 001H

Laboratory Job ID: 890-4971-1
SDG: 03D2024202

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4971-1
Project/Site: Red Bull Federal 001H SDG: 03D2024202

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Job ID: 890-4971-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4971-1

Receipt
The samples were received on 7/20/2023 2:30 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 5.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS05A (890-4971-1), SS07A (890-4971-2), SS08 (890-4971-3), SS08A (890-4971-4), SS09 (890-4971-5), SS09A (890-4971-6), FS01 (890-4971-7), FS02 (890-4971-8), FS03 (890-4971-9) and FS04 (890-4971-10).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS07A (890-4971-2), SS08A (890-4971-4), SS09 (890-4971-5), FS01 (890-4971-7), FS02 (890-4971-8) and FS04 (890-4971-10). 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-58217 and 880-58217 and analytical batch 880-58468 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: SS05A

Lab Sample ID: 890-4971-1
Matrix: Solid
Date Collected: 07/20/23 09:45
Date Received: 07/20/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 18:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 18:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 18:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/26/23 09:15	07/26/23 18:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 18:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/26/23 09:15	07/26/23 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*07/26/23 09:15*	*07/26/23 18:51*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*07/26/23 09:15*	*07/26/23 18:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 14:10	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 14:10	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 14:10	1
Total TPH	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*08/03/23 09:19*	*08/04/23 14:10*	*1*
o-Terphenyl	*123*		*70 - 130*	*08/03/23 09:19*	*08/04/23 14:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**94.2**	**F1**	4.97		mg/Kg			07/25/23 13:01	1

Client Sample ID: SS07A

Lab Sample ID: 890-4971-2
Matrix: Solid
Date Collected: 07/20/23 09:50
Date Received: 07/20/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 19:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 19:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 19:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/26/23 09:15	07/26/23 19:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 19:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/26/23 09:15	07/26/23 19:11	1

Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: SS07A

Date Collected: 07/20/23 09:50
Date Received: 07/20/23 14:30
Sample Depth: 1

Lab Sample ID: 890-4971-2

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*58*	*S1-*	*70 - 130*	*07/26/23 09:15*	*07/26/23 19:11*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/26/23 09:15*	*07/26/23 19:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		08/03/23 09:19	08/04/23 15:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/03/23 09:19	08/04/23 15:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/03/23 09:19	08/04/23 15:28	1
Total TPH	<49.9	U	49.9	mg/Kg		08/03/23 09:19	08/04/23 15:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*90*		*70 - 130*	*08/03/23 09:19*	*08/04/23 15:28*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/03/23 09:19*	*08/04/23 15:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**48.0**		5.00	mg/Kg			07/25/23 13:16	1

Client Sample ID: SS08

Date Collected: 07/20/23 10:00
Date Received: 07/20/23 14:30
Sample Depth: 0.5

Lab Sample ID: 890-4971-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/23 09:15	07/26/23 19:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/23 09:15	07/26/23 19:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/23 09:15	07/26/23 19:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/26/23 09:15	07/26/23 19:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/23 09:15	07/26/23 19:32	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/26/23 09:15	07/26/23 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*07/26/23 09:15*	*07/26/23 19:32*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*07/26/23 09:15*	*07/26/23 19:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/27/23 07:42	1

Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: SS08

Lab Sample ID: 890-4971-3
Matrix: Solid
Date Collected: 07/20/23 10:00
Date Received: 07/20/23 14:30
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		08/03/23 09:19	08/04/23 15:54	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/03/23 09:19	08/04/23 15:54	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/03/23 09:19	08/04/23 15:54	1
Total TPH	<49.7	U	49.7		mg/Kg		08/03/23 09:19	08/04/23 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*08/03/23 09:19*	*08/04/23 15:54*	*1*
o-Terphenyl	*109*		*70 - 130*	*08/03/23 09:19*	*08/04/23 15:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**44.4**		4.99		mg/Kg			07/25/23 13:21	1

Client Sample ID: SS08A

Lab Sample ID: 890-4971-4
Matrix: Solid
Date Collected: 07/20/23 10:05
Date Received: 07/20/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 19:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 19:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 19:52	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/26/23 09:15	07/26/23 19:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 19:52	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/26/23 09:15	07/26/23 19:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*07/26/23 09:15*	*07/26/23 19:52*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/26/23 09:15*	*07/26/23 19:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/03/23 09:19	08/04/23 16:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/03/23 09:19	08/04/23 16:20	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/03/23 09:19	08/04/23 16:20	1

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Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: SS08A

Lab Sample ID: 890-4971-4
Matrix: Solid
Date Collected: 07/20/23 10:05
Date Received: 07/20/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg		08/03/23 09:19	08/04/23 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*08/03/23 09:19*	*08/04/23 16:20*	*1*
o-Terphenyl	*99*		*70 - 130*	*08/03/23 09:19*	*08/04/23 16:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**209**		5.01		mg/Kg			07/25/23 13:36	1

Client Sample ID: SS09

Lab Sample ID: 890-4971-5
Matrix: Solid
Date Collected: 07/20/23 10:10
Date Received: 07/20/23 14:30
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 20:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 20:13	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 20:13	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/26/23 09:15	07/26/23 20:13	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/26/23 09:15	07/26/23 20:13	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/26/23 09:15	07/26/23 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*07/26/23 09:15*	*07/26/23 20:13*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/26/23 09:15*	*07/26/23 20:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 16:46	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 16:46	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 16:46	1
Total TPH	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*08/03/23 09:19*	*08/04/23 16:46*	*1*
o-Terphenyl	*99*		*70 - 130*	*08/03/23 09:19*	*08/04/23 16:46*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: SS09

Lab Sample ID: 890-4971-5
Matrix: Solid
Date Collected: 07/20/23 10:10
Date Received: 07/20/23 14:30
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	71.7		5.03		mg/Kg			07/25/23 13:41	1

Client Sample ID: SS09A

Lab Sample ID: 890-4971-6
Matrix: Solid
Date Collected: 07/20/23 10:15
Date Received: 07/20/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 20:33	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 20:33	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 20:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/26/23 09:15	07/26/23 20:33	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 20:33	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/26/23 09:15	07/26/23 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*07/26/23 09:15*	*07/26/23 20:33*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*07/26/23 09:15*	*07/26/23 20:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 17:12	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 17:12	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 17:12	1
Total TPH	<50.1	U	50.1		mg/Kg		08/03/23 09:19	08/04/23 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*08/03/23 09:19*	*08/04/23 17:12*	*1*
o-Terphenyl	*102*		*70 - 130*	*08/03/23 09:19*	*08/04/23 17:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.4		5.00		mg/Kg			07/25/23 13:46	1

Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: FS01

Lab Sample ID: 890-4971-7

Date Collected: 07/20/23 10:45
Matrix: Solid
Date Received: 07/20/23 14:30
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/26/23 09:15	07/26/23 20:54	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/26/23 09:15	07/26/23 20:54	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/26/23 09:15	07/26/23 20:54	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/26/23 09:15	07/26/23 20:54	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/26/23 09:15	07/26/23 20:54	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/26/23 09:15	07/26/23 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/26/23 09:15*	*07/26/23 20:54*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*07/26/23 09:15*	*07/26/23 20:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		08/03/23 09:19	08/04/23 17:39	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/03/23 09:19	08/04/23 17:39	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/03/23 09:19	08/04/23 17:39	1
Total TPH	<50.4	U	50.4		mg/Kg		08/03/23 09:19	08/04/23 17:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*08/03/23 09:19*	*08/04/23 17:39*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/03/23 09:19*	*08/04/23 17:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**137**		5.01		mg/Kg			07/25/23 13:51	1

Client Sample ID: FS02

Lab Sample ID: 890-4971-8

Date Collected: 07/20/23 10:50
Matrix: Solid
Date Received: 07/20/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/26/23 09:15	07/26/23 21:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:14	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/26/23 09:15	07/26/23 21:14	1

Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: FS02

Lab Sample ID: 890-4971-8
Matrix: Solid
Date Collected: 07/20/23 10:50
Date Received: 07/20/23 14:30
Sample Depth: 1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/26/23 09:15*	*07/26/23 21:14*	*1*
1,4-Difluorobenzene (Surr)	*58*	*S1-*	*70 - 130*	*07/26/23 09:15*	*07/26/23 21:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			08/04/23 18:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2	mg/Kg		08/03/23 09:19	08/04/23 18:04	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		08/03/23 09:19	08/04/23 18:04	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		08/03/23 09:19	08/04/23 18:04	1
Total TPH	<50.2	U	50.2	mg/Kg		08/03/23 09:19	08/04/23 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*97*		*70 - 130*	*08/03/23 09:19*	*08/04/23 18:04*	*1*
o-Terphenyl	*105*		*70 - 130*	*08/03/23 09:19*	*08/04/23 18:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**80.2**		4.99	mg/Kg			07/25/23 13:56	1

Client Sample ID: FS03

Lab Sample ID: 890-4971-9
Matrix: Solid
Date Collected: 07/20/23 10:55
Date Received: 07/20/23 14:30
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/26/23 09:15	07/26/23 21:35	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/26/23 09:15	07/26/23 21:35	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/26/23 09:15	07/26/23 21:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/26/23 09:15	07/26/23 21:35	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/26/23 09:15	07/26/23 21:35	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/26/23 09:15	07/26/23 21:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/26/23 09:15*	*07/26/23 21:35*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*07/26/23 09:15*	*07/26/23 21:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/27/23 07:42	1

Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: FS03

Lab Sample ID: 890-4971-9

Date Collected: 07/20/23 10:55
Matrix: Solid
Date Received: 07/20/23 14:30
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/07/23 09:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/03/23 09:19	08/04/23 18:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/03/23 09:19	08/04/23 18:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/03/23 09:19	08/04/23 18:28	1
Total TPH	<50.0	U	50.0		mg/Kg		08/03/23 09:19	08/04/23 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*08/03/23 09:19*	*08/04/23 18:28*	*1*
o-Terphenyl	*102*		*70 - 130*	*08/03/23 09:19*	*08/04/23 18:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		4.99		mg/Kg			07/25/23 14:01	1

Client Sample ID: FS04

Lab Sample ID: 890-4971-10

Date Collected: 07/20/23 11:00
Matrix: Solid
Date Received: 07/20/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:55	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/26/23 09:15	07/26/23 21:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/23 09:15	07/26/23 21:55	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/26/23 09:15	07/26/23 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/26/23 09:15*	*07/26/23 21:55*	*1*
1,4-Difluorobenzene (Surr)	*59*	*S1-*	*70 - 130*	*07/26/23 09:15*	*07/26/23 21:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			07/27/23 07:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			08/07/23 09:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 18:53	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 18:53	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 18:53	1

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Client Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: FS04

Date Collected: 07/20/23 11:00
Date Received: 07/20/23 14:30
Sample Depth: 1

Lab Sample ID: 890-4971-10

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg		08/03/23 09:19	08/04/23 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*08/03/23 09:19*	*08/04/23 18:53*	*1*
o-Terphenyl	*110*		*70 - 130*	*08/03/23 09:19*	*08/04/23 18:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**69.2**		4.98		mg/Kg			07/25/23 14:06	1

Surrogate Summary

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-31217-A-2-C MS	Matrix Spike	111	108
880-31217-A-2-D MSD	Matrix Spike Duplicate	113	106
890-4971-1	SS05A	77	75
890-4971-2	SS07A	58 S1-	95
890-4971-3	SS08	74	76
890-4971-4	SS08A	61 S1-	97
890-4971-5	SS09	60 S1-	92
890-4971-6	SS09A	72	72
890-4971-7	FS01	88	67 S1-
890-4971-8	FS02	92	58 S1-
890-4971-9	FS03	87	72
890-4971-10	FS04	89	59 S1-
LCS 880-58522/1-A	Lab Control Sample	100	104
LCSD 880-58522/2-A	Lab Control Sample Dup	85	112
MB 880-58522/5-A	Method Blank	71	89

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4971-1	SS05A	108	123
890-4971-1 MS	SS05A	96	90
890-4971-1 MSD	SS05A	95	88
890-4971-2	SS07A	90	101
890-4971-3	SS08	100	109
890-4971-4	SS08A	93	99
890-4971-5	SS09	92	99
890-4971-6	SS09A	97	102
890-4971-7	FS01	91	98
890-4971-8	FS02	97	105
890-4971-9	FS03	95	102
890-4971-10	FS04	97	110
LCS 880-59184/2-A	Lab Control Sample	94	96
LCSD 880-59184/3-A	Lab Control Sample Dup	84	84
MB 880-59184/1-A	Method Blank	81	90

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58522/5-A
Matrix: Solid
Analysis Batch: 58518

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58522

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 14:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 14:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 14:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/26/23 09:15	07/26/23 14:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/26/23 09:15	07/26/23 14:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/26/23 09:15	07/26/23 14:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*07/26/23 09:15*	*07/26/23 14:01*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/26/23 09:15*	*07/26/23 14:01*	*1*

Lab Sample ID: LCS 880-58522/1-A
Matrix: Solid
Analysis Batch: 58518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58522

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09945		mg/Kg		99	70 - 130		
Toluene			0.100	0.08029		mg/Kg		80	70 - 130		
Ethylbenzene			0.100	0.08800		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1787		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.09491		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-58522/2-A
Matrix: Solid
Analysis Batch: 58518

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58522

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1140		mg/Kg		114	70 - 130	14	35
Toluene			0.100	0.08429		mg/Kg		84	70 - 130	5	35
Ethylbenzene			0.100	0.08383		mg/Kg		84	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1630		mg/Kg		81	70 - 130	9	35
o-Xylene			0.100	0.08269		mg/Kg		83	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-31217-A-2-C MS
Matrix: Solid
Analysis Batch: 58518

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58522

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0996	0.1237		mg/Kg		124	70 - 130		
Toluene	<0.00202	U	0.0996	0.1035		mg/Kg		104	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

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

Lab Sample ID: 880-31217-A-2-C MS
Matrix: Solid
Analysis Batch: 58518

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58522

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0996	0.1153		mg/Kg		116	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.2311		mg/Kg		116	70 - 130
o-Xylene	<0.00202	U	0.0996	0.1136		mg/Kg		114	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-31217-A-2-D MSD
Matrix: Solid
Analysis Batch: 58518

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58522

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0998	0.1170		mg/Kg		117	70 - 130	6	35
Toluene	<0.00202	U	0.0998	0.09904		mg/Kg		99	70 - 130	4	35
Ethylbenzene	<0.00202	U	0.0998	0.1090		mg/Kg		109	70 - 130	6	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.2234		mg/Kg		112	70 - 130	3	35
o-Xylene	<0.00202	U	0.0998	0.1137		mg/Kg		114	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 880-59184/1-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59184

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/23 09:19	08/04/23 11:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/23 09:19	08/04/23 11:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/23 09:19	08/04/23 11:21	1
Total TPH	<50.0	U	50.0	mg/Kg		08/03/23 09:19	08/04/23 11:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*08/03/23 09:19*	*08/04/23 11:21*	*1*
o-Terphenyl	*90*		*70 - 130*	*08/03/23 09:19*	*08/04/23 11:21*	*1*

Lab Sample ID: LCS 880-59184/2-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	907.0		mg/Kg		91	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

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

Lab Sample ID: LCS 880-59184/2-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59184

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics (Over C10-C28)			1000	883.8		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: LCSD 880-59184/3-A
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59184

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	805.7		mg/Kg		81	70 - 130	12	20
Diesel Range Organics (Over C10-C28)			1000	904.2		mg/Kg		90	70 - 130	2	20

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

Lab Sample ID: 890-4971-1 MS
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: SS05A
Prep Type: Total/NA
Prep Batch: 59184

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	824.4		mg/Kg		79	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	951.4		mg/Kg		94	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

Lab Sample ID: 890-4971-1 MSD
Matrix: Solid
Analysis Batch: 59287

Client Sample ID: SS05A
Prep Type: Total/NA
Prep Batch: 59184

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	821.3		mg/Kg		78	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	943.9		mg/Kg		94	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58217/1-A
Matrix: Solid
Analysis Batch: 58468

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/25/23 11:37	1

Lab Sample ID: LCS 880-58217/2-A
Matrix: Solid
Analysis Batch: 58468

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	242.2		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-58217/3-A
Matrix: Solid
Analysis Batch: 58468

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	242.6		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-4971-1 MS
Matrix: Solid
Analysis Batch: 58468

Client Sample ID: SS05A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	94.2	F1	249	305.6	F1	mg/Kg		85	90 - 110		

Lab Sample ID: 890-4971-1 MSD
Matrix: Solid
Analysis Batch: 58468

Client Sample ID: SS05A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	94.2	F1	249	305.9	F1	mg/Kg		85	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

GC VOA

Analysis Batch: 58518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Total/NA	Solid	8021B	58522
890-4971-2	SS07A	Total/NA	Solid	8021B	58522
890-4971-3	SS08	Total/NA	Solid	8021B	58522
890-4971-4	SS08A	Total/NA	Solid	8021B	58522
890-4971-5	SS09	Total/NA	Solid	8021B	58522
890-4971-6	SS09A	Total/NA	Solid	8021B	58522
890-4971-7	FS01	Total/NA	Solid	8021B	58522
890-4971-8	FS02	Total/NA	Solid	8021B	58522
890-4971-9	FS03	Total/NA	Solid	8021B	58522
890-4971-10	FS04	Total/NA	Solid	8021B	58522
MB 880-58522/5-A	Method Blank	Total/NA	Solid	8021B	58522
LCS 880-58522/1-A	Lab Control Sample	Total/NA	Solid	8021B	58522
LCSD 880-58522/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58522
880-31217-A-2-C MS	Matrix Spike	Total/NA	Solid	8021B	58522
880-31217-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58522

Prep Batch: 58522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Total/NA	Solid	5035	
890-4971-2	SS07A	Total/NA	Solid	5035	
890-4971-3	SS08	Total/NA	Solid	5035	
890-4971-4	SS08A	Total/NA	Solid	5035	
890-4971-5	SS09	Total/NA	Solid	5035	
890-4971-6	SS09A	Total/NA	Solid	5035	
890-4971-7	FS01	Total/NA	Solid	5035	
890-4971-8	FS02	Total/NA	Solid	5035	
890-4971-9	FS03	Total/NA	Solid	5035	
890-4971-10	FS04	Total/NA	Solid	5035	
MB 880-58522/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58522/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58522/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-31217-A-2-C MS	Matrix Spike	Total/NA	Solid	5035	
880-31217-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Total/NA	Solid	Total BTEX	
890-4971-2	SS07A	Total/NA	Solid	Total BTEX	
890-4971-3	SS08	Total/NA	Solid	Total BTEX	
890-4971-4	SS08A	Total/NA	Solid	Total BTEX	
890-4971-5	SS09	Total/NA	Solid	Total BTEX	
890-4971-6	SS09A	Total/NA	Solid	Total BTEX	
890-4971-7	FS01	Total/NA	Solid	Total BTEX	
890-4971-8	FS02	Total/NA	Solid	Total BTEX	
890-4971-9	FS03	Total/NA	Solid	Total BTEX	
890-4971-10	FS04	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

GC Semi VOA

Prep Batch: 59184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Total/NA	Solid	8015NM Prep	
890-4971-2	SS07A	Total/NA	Solid	8015NM Prep	
890-4971-3	SS08	Total/NA	Solid	8015NM Prep	
890-4971-4	SS08A	Total/NA	Solid	8015NM Prep	
890-4971-5	SS09	Total/NA	Solid	8015NM Prep	
890-4971-6	SS09A	Total/NA	Solid	8015NM Prep	
890-4971-7	FS01	Total/NA	Solid	8015NM Prep	
890-4971-8	FS02	Total/NA	Solid	8015NM Prep	
890-4971-9	FS03	Total/NA	Solid	8015NM Prep	
890-4971-10	FS04	Total/NA	Solid	8015NM Prep	
MB 880-59184/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59184/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59184/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4971-1 MS	SS05A	Total/NA	Solid	8015NM Prep	
890-4971-1 MSD	SS05A	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Total/NA	Solid	8015B NM	59184
890-4971-2	SS07A	Total/NA	Solid	8015B NM	59184
890-4971-3	SS08	Total/NA	Solid	8015B NM	59184
890-4971-4	SS08A	Total/NA	Solid	8015B NM	59184
890-4971-5	SS09	Total/NA	Solid	8015B NM	59184
890-4971-6	SS09A	Total/NA	Solid	8015B NM	59184
890-4971-7	FS01	Total/NA	Solid	8015B NM	59184
890-4971-8	FS02	Total/NA	Solid	8015B NM	59184
890-4971-9	FS03	Total/NA	Solid	8015B NM	59184
890-4971-10	FS04	Total/NA	Solid	8015B NM	59184
MB 880-59184/1-A	Method Blank	Total/NA	Solid	8015B NM	59184
LCS 880-59184/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59184
LCSD 880-59184/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59184
890-4971-1 MS	SS05A	Total/NA	Solid	8015B NM	59184
890-4971-1 MSD	SS05A	Total/NA	Solid	8015B NM	59184

Analysis Batch: 59377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Total/NA	Solid	8015 NM	
890-4971-2	SS07A	Total/NA	Solid	8015 NM	
890-4971-3	SS08	Total/NA	Solid	8015 NM	
890-4971-4	SS08A	Total/NA	Solid	8015 NM	
890-4971-5	SS09	Total/NA	Solid	8015 NM	
890-4971-6	SS09A	Total/NA	Solid	8015 NM	
890-4971-7	FS01	Total/NA	Solid	8015 NM	
890-4971-8	FS02	Total/NA	Solid	8015 NM	
890-4971-9	FS03	Total/NA	Solid	8015 NM	
890-4971-10	FS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

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Leach Batch: 58217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Soluble	Solid	DI Leach	
890-4971-2	SS07A	Soluble	Solid	DI Leach	
890-4971-3	SS08	Soluble	Solid	DI Leach	
890-4971-4	SS08A	Soluble	Solid	DI Leach	
890-4971-5	SS09	Soluble	Solid	DI Leach	
890-4971-6	SS09A	Soluble	Solid	DI Leach	
890-4971-7	FS01	Soluble	Solid	DI Leach	
890-4971-8	FS02	Soluble	Solid	DI Leach	
890-4971-9	FS03	Soluble	Solid	DI Leach	
890-4971-10	FS04	Soluble	Solid	DI Leach	
MB 880-58217/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58217/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58217/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4971-1 MS	SS05A	Soluble	Solid	DI Leach	
890-4971-1 MSD	SS05A	Soluble	Solid	DI Leach	

Analysis Batch: 58468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4971-1	SS05A	Soluble	Solid	300.0	58217
890-4971-2	SS07A	Soluble	Solid	300.0	58217
890-4971-3	SS08	Soluble	Solid	300.0	58217
890-4971-4	SS08A	Soluble	Solid	300.0	58217
890-4971-5	SS09	Soluble	Solid	300.0	58217
890-4971-6	SS09A	Soluble	Solid	300.0	58217
890-4971-7	FS01	Soluble	Solid	300.0	58217
890-4971-8	FS02	Soluble	Solid	300.0	58217
890-4971-9	FS03	Soluble	Solid	300.0	58217
890-4971-10	FS04	Soluble	Solid	300.0	58217
MB 880-58217/1-A	Method Blank	Soluble	Solid	300.0	58217
LCS 880-58217/2-A	Lab Control Sample	Soluble	Solid	300.0	58217
LCSD 880-58217/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58217
890-4971-1 MS	SS05A	Soluble	Solid	300.0	58217
890-4971-1 MSD	SS05A	Soluble	Solid	300.0	58217

Lab Chronicle

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: SS05A
Date Collected: 07/20/23 09:45
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 18:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 14:10	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:01	CH	EET MID

Client Sample ID: SS07A
Date Collected: 07/20/23 09:50
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 19:11	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 15:28	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:16	CH	EET MID

Client Sample ID: SS08
Date Collected: 07/20/23 10:00
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 19:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 15:54	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:21	CH	EET MID

Client Sample ID: SS08A
Date Collected: 07/20/23 10:05
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 19:52	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: SS08A
Date Collected: 07/20/23 10:05
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 16:20	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:36	CH	EET MID

Client Sample ID: SS09
Date Collected: 07/20/23 10:10
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 20:13	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 16:46	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:41	CH	EET MID

Client Sample ID: SS09A
Date Collected: 07/20/23 10:15
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 20:33	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 17:12	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:46	CH	EET MID

Client Sample ID: FS01
Date Collected: 07/20/23 10:45
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 20:54	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 17:39	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Client Sample ID: FS01
Date Collected: 07/20/23 10:45
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:51	CH	EET MID

Client Sample ID: FS02
Date Collected: 07/20/23 10:50
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 21:14	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/04/23 18:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 18:04	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 13:56	CH	EET MID

Client Sample ID: FS03
Date Collected: 07/20/23 10:55
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 21:35	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 18:28	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 14:01	CH	EET MID

Client Sample ID: FS04
Date Collected: 07/20/23 11:00
Date Received: 07/20/23 14:30

Lab Sample ID: 890-4971-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	58522	07/26/23 09:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58518	07/26/23 21:55	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58617	07/27/23 07:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			59377	08/07/23 09:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	59184	08/03/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59287	08/04/23 18:53	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58217	07/21/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1			58468	07/25/23 14:06	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Red Bull Federal 001H

Job ID: 890-4971-1
SDG: 03D2024202

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4971-1	SS05A	Solid	07/20/23 09:45	07/20/23 14:30	1
890-4971-2	SS07A	Solid	07/20/23 09:50	07/20/23 14:30	1
890-4971-3	SS08	Solid	07/20/23 10:00	07/20/23 14:30	0.5
890-4971-4	SS08A	Solid	07/20/23 10:05	07/20/23 14:30	1
890-4971-5	SS09	Solid	07/20/23 10:10	07/20/23 14:30	0.5
890-4971-6	SS09A	Solid	07/20/23 10:15	07/20/23 14:30	1
890-4971-7	FS01	Solid	07/20/23 10:45	07/20/23 14:30	0.5
890-4971-8	FS02	Solid	07/20/23 10:50	07/20/23 14:30	1
890-4971-9	FS03	Solid	07/20/23 10:55	07/20/23 14:30	0.5
890-4971-10	FS04	Solid	07/20/23 11:00	07/20/23 14:30	1

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com, kjennings@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Red Bull Federal 001H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024202	Due Date:	
Project Location:	32.0854,-103.5447	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.6
Total Containers:		Corrected Temperature:	5.4

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

890-4971 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SS05A	Soil	7/20/2023	945	1'	Comp	1		x	x	x	
SS07A	Soil	7/20/2023	950	1'	Comp	1		x	x	x	
SS08	Soil	7/20/2023	1000	0.5'	Comp	1		x	x	x	
SS08A	Soil	7/20/2023	1005	1'	Comp	1		x	x	x	
SS09	Soil	7/20/2023	1010	0.5'	Comp	1		x	x	x	
SS09A	Soil	7/20/2023	1015	1'	Comp	1		x	x	x	
FS01	Soil	7/20/2023	1045	1.5'	Comp	1		x	x	x	
FS02	Soil	7/20/2023	1050	1'	Comp	1		x	x	x	
FS03	Soil	7/20/2023	1055	1.5'	Comp	1		x	x	x	
FS04	Soil	7/20/2023	1100	1'	Comp	1		x	x	x	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Peter Van Patten		7.20.23 1430			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4971-1
SDG Number: 03D2024202

Login Number: 4971
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4971-1
SDG Number: 03D2024202

Login Number: 4971
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/24/23 08:33 AM

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 7/17/2023)
Date: Thursday, July 13, 2023 2:20:01 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, July 13, 2023 9:18 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>; Laird, Jacob <Jacob.Laird@conocophillips.com>; brittany.esparza@conocophillips.com
Subject: [EXTERNAL] COP - Sampling Notification (Week of 7/17/2023)

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

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following sites the week of July 17, 2023.

- Buck Federal CTB / NAPP2315731307

- Sampling Date: 7/17/2023 @ 0900 MST

- Red Bull 35 Federal 1 Poly Line / NAPP2317142248
  - Sampling Date: 7/20/2023 @ 0900 MST

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

ENSOLUM

APPENDIX E

Final C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2317142248
District RP	
Facility ID	fAPP2203856699
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Jacob Laird	Contact Telephone	(575) 703-5482
Contact email	Jacob.Laird@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2317142248
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.0854 Longitude -103.5447
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Red Bull 35 Federal 001H	Site Type	Flowline
Date Release Discovered	June 13, 2023	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
K	35	25S	33E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* Intrepid Potash)

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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 1.95	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a pin hole in a poly water transfer line. This release was off pad. Evaluation will be made of the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2317142248
District RP	
Facility ID	fAPP2203856699
Application ID	

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

Initial Response

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

- ■ The source of the release has been stopped.
- ■ The impacted area has been secured to protect human health and the environment.
- ■ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ■ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have 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.

Printed Name: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 6/20/2023

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Shelly Wells Date: 6/21/2023

Spill Calculation - On-Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	Estimated *Pool* Area (sq. ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	50.00	15.00	0.15	750.00	1.67	0.00	1.67
Rectangle B	10.00	10.00	0.15	100.00	0.22	0.00	0.22
Rectangle C	25.00	1.00	0.15	25.00	0.06	0.00	0.06
Rectangle D				0.00	0.00	0.00	0.00
Rectangle E				0.00	0.00	0.00	0.00
Rectangle F				0.00	0.00	0.00	0.00
Rectangle G				0.00	0.00	0.00	0.00
Rectangle H				0.00	0.00	0.00	0.00
Rectangle I				0.00	0.00	0.00	0.00
Rectangle J				0.00	0.00	0.00	0.00
						Total Surface Pool Volume Released, Release to Soil/Caliche:	1.95

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: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 230697
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	6/21/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2317142248
District RP	
Facility ID	fAPP2203856699
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?	>106 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2317142248
District RP	
Facility ID	fAPP2203856699
Application ID	

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

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: Jacob Laird Date: _____8/21/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: ___575-703-5482_____

OCD Only

Received by: Shelly Wells Date: 8/24/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2317142248
District RP	
Facility ID	fAPP2203856699
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jacob Laird Title: Environmental Engineer

Signature: Jacob Laird Date: 8/21/2023

email: Jacob.Laird@conocophillips.com Telephone: 575-703-5482

OCD Only

Received by: Shelly Wells Date: 8/24/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Nelson Velez Date: 12/07/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

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

Action 257013

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 257013
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	12/7/2023