

May 5, 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

Ruby Federal

Incident Number NAPP2231448981

Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Permian, LLC (Maverick), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Ruby Federal (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a surface flowline release of crude oil and produced water onto the surrounding pasture. Based on excavation activities and laboratory analytical results from the soil sampling events, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting no further action for Incident Number NAPP2231448981.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit N, Section 17, Township 17 South, Range 32 East, in Lea County, New Mexico (32.830273°, -103.791966°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 27, 2022, a surface flowline leak resulted in the release of approximately 0.09 barrels (bbls) of crude oil and approximately 8.55 bbls of produced water onto the surrounding pasture. Approximately 0.5 bbls of released produced water were recovered. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on November 10, 2022. The release was assigned Incident Number NAPP2231448981.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be between 51 feet and 100 feet below ground surface (bgs) based on regional groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well RA 12521 POD1, located approximately 9,058 feet southeast of the Site. The groundwater well has a reported depth to

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 601 North Marienfeld Street | Midland, TX 79701 | ensolum.com

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groundwater of 92 feet bgs and a total depth of 105 feet bgs. Ground surface elevation at the groundwater well location is 4,020 feet above mean sea level (amsl), which is approximately 33 feet higher in elevation than the Site. 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 a stream, located approximately 1.9 miles northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 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 that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES

On October 27, 2022, Ensolum personnel visited the Site to document the release extent. The release extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. Based on visual observations of the release, excavation activities were warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between December 8, 2022, and January 5, 2023, Ensolum personnel were at the Site to oversee excavation activities. Impacted soil was excavated as indicated by visible staining within the release area and field screening results. Excavation activities were performed utilizing a backhoe, transport vehicles, and hand shoveling. To direct excavation activities, soil was screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

Following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls 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. Confirmation soil samples FS01 through FS12 were collected from the floor of the excavation at a depth of 4 feet bgs. Confirmation soil samples SW01 through SW07 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. Additionally, four delineation soil samples (SS01 through SS04) were collected around the release extent from a depth of 0.5 feet bgs, to confirm the lateral extent of the release. The excavation extent, excavation soil sample locations, and delineation soil sample locations were mapped utilizing a handheld



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GPS unit and are depicted on Figure 2. Photographic documentation of the excavation activities is included in 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 analyses of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Lateral delineation soil samples SS01 through SS04 indicated all COC concentrations were compliant with the most stringent Table 1 Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for excavation floor samples FS01, FS06 through FS08, FS10 through FS12, and excavation sidewall samples SW01 through SW07 indicated that all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. Laboratory analytical results for excavation floor samples FS02 through FS05 and FS09 indicated that TPH and/or GRO/DRO concentrations exceeded Site Closure Criteria and additional excavation activities were warranted.

Ensolum personnel returned to the Site on April 3, 2023, to oversee additional excavation activities in the areas of floor samples FS02 through FS05 and FS09. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to a depth of 4.5 feet bgs. Upon completion of excavation activities, 5-point composite soil samples FS02A through FS05A and FS09A were collected from the floor of the excavation at a depth of 4.5 feet bgs. The soil samples were collected, handled, and analyzed following the same procedure described above.

Laboratory analytical results for soil samples FS02A through FS05A and FS09A indicated that all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

The excavation area measured approximately 2,100 square feet in areal extent. A total of approximately 375 cubic yards of impacted soil was removed, transported, and properly disposed of at R360 Environmental Solutions in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the October 27, 2022, release of crude oil and produced water. Laboratory analytical results for the final excavation soil samples indicated concentrations of all COCs were compliant with the Site Closure Criteria and reclamation requirement. Based on the laboratory analytical results, no further remediation was required. Maverick will backfill the excavation with material purchased locally, recontour the Site to match preexisting site conditions, and re-seed the disturbed area with the appropriate BLM seed mixture during the next possible growing season for optimal vegetation growth.

Maverick believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, Maverick respectfully requests closure for Incident Number NAPP2231448981. The Final C-141 is included in Appendix E.



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

Sincerely, **Ensolum, LLC**

Kalei Jennings Senior Scientist Aimee Cole

Senior Managing Scientist

cc: Bryce Wagoner, Maverick Permian, LLC

Bureau of Land Management

Appendices:

Figure 1 Site Receptor Map

Figure 2 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Referenced Well Records

Appendix B Photographic Log

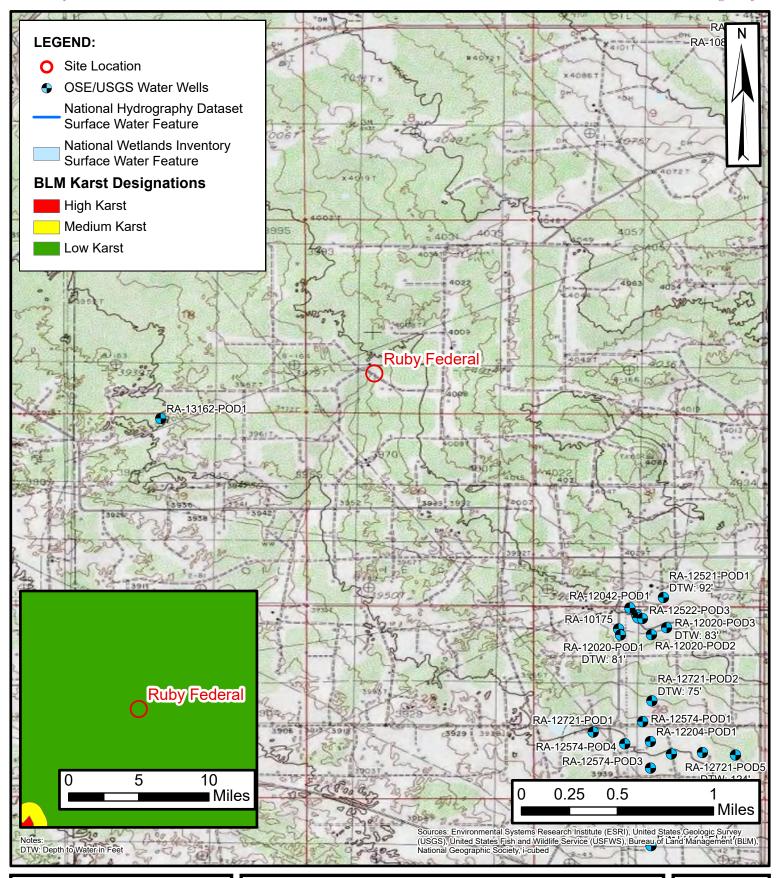
Appendix C Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix D NMOCD Notifications

Appendix E Final C-141



FIGURES

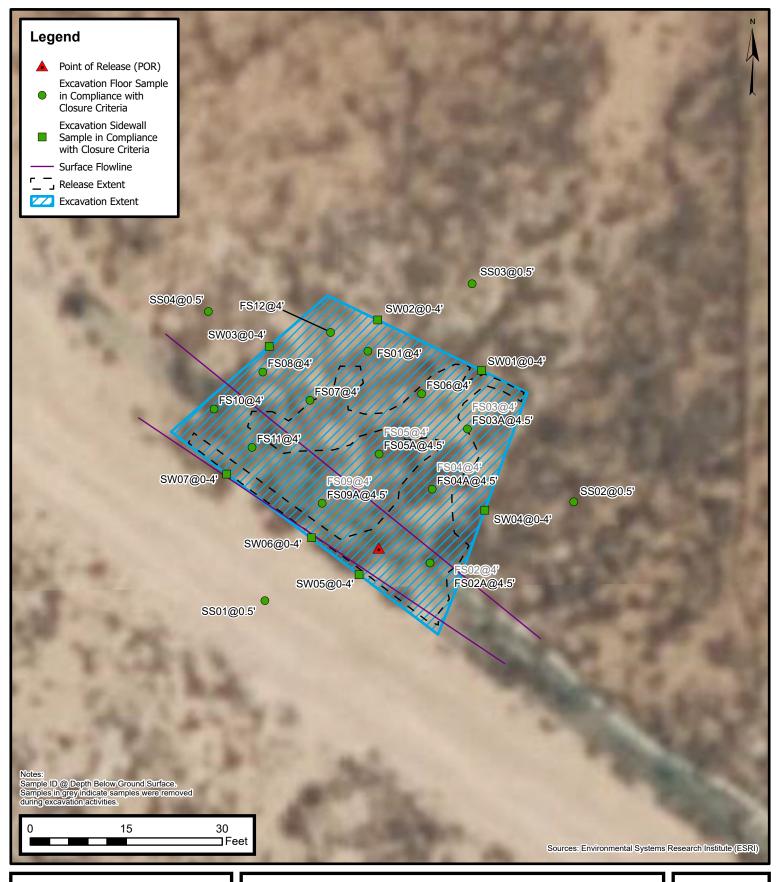




SITE RECEPTOR MAP

Maverick Permian, LLC Ruby Federal Incident Number: NAPP2231448981 Unit **N**, Sec 17, T17S, R32E Lea County, New Mexico **FIGURE**

1





Excavation Soil Sample Locations

Maverick Permian, LLC
Ruby Federal
Incident Number: NAPP2231448981
Unit N, Sec 17, T17S, R32E
Lea County, New Mexico

FIGURE

2



TABLES



	TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Ruby Federal Maverick Permian, LLC 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 1	Closure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000			
	Excavation Soil Samples												
FS01	12/08/2022	4	<0.00200	<0.00399	<49.9	53.6	<49.9	53.6	53.6	15.8			
FS02	12/19/2022	4	<0.00200	0.0182	<49.9	1990	<49.9	1,990	1,990	1,770			
FS02A	04/03/2023	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0			
FS03	12/28/2022	4	<0.00201	<0.00402	<49.9	1430	<49.9	1,430	1,430	116			
FS03A	04/03/2012	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0			
FS04	12/28/2022	4	<0.00200	<0.00401	<49.9	2070	<49.9	2,070	2,070	244			
FS04A	04/12/2023	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0			
FS05	12/28/2022	4	< 0.00199	0.106	<250	4,530	<250	4,530	4,530	4,320			
FS05A	04/03/2023	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0			
FS06	12/28/2022	4	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	41.4			
FS07	12/28/2022	4	<0.00199	0.0388	<49.9	89.1	<49.9	89.1	89.1	25.4			
FS08	12/28/2022	4	<0.00199	<0.00398	<50.0	97.6	<50.0	97.6	97.6	18.6			
FS09	12/28/2022	4	<0.0998	29.5	937	7,830	<250	8,767	8,770	4,980			
FS09A	04/03/2023	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0			
FS10	12/28/2022	4	<0.0996	1.27	<50.0	94.6	<50.0	94.6	94.6	13.2			
FS11	01/05/2023	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	164			
FS12	01/05/2023	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	550			
					dewall Soil Samp		T	T	T				
SW01	12/08/2022	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	12.7*			
SW02	12/08/2022	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<5.05*			
SW03	12/08/2022	0 - 4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	<5.04*			
SW04	12/08/2022	0 - 4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	197*			
SW05	12/08/2022	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	593*			
SW06	01/05/2023	0 - 4	<0.00200	<0.00401	<50.0	74.8	<50.0	74.8	74.8	534*			
SW07	01/05/2023	0 - 4	<0.00199	<0000398	<49.9	<49.9	<49.9	<49.9	<49.9	426*			
0004	05/04/0007	1 05 1	0.050		niation Soil Sam	•	40.0	40.0	1 400	00.04			
SS01	05/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0*			
SS02	05/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0*			
SS03	05/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0*			
SS04	05/01/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0*			

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMAC: New Mexico Administrative Code

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

Grey text represents samples that have been excavated

* - indicates sample locations where the reclamation requipment was applied



APPENDIX A

Referenced Well Records



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**

Q64 Q16 Q4 Sec Tws Rng

RA 12521 POD1

21 17S 32E

615127

3631271

Driller License: 1456

Driller Company:

Driller Name:

WHITE, JOHN W

WHITE DRILLING COMPANY

Drill Start Date:

07/21/2017

Drill Finish Date:

07/26/2017

105 feet

Plug Date:

Shallow

Log File Date:

08/22/2017

2.00

PCW Rcv Date:

Source:

Pump Type: Casing Size: Pipe Discharge Size:

Depth Well:

Estimated Yield:

Depth Water: 92 feet

Water Bearing Stratifications:

Top Bottom Description

101 Sandstone/Gravel/Conglomerate

85 101

105 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom

75 105

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

12/5/22 2:12 PM

POINT OF DIVERSION SUMMARY

Received by OCD: 5/17/2023 3:13:50 PM

USGS Home Contact USGS Search USGS Received by OCD: 5/17/2023 3:13:50 PM

National Water Information System: Web Interface

 Data Category:
 Geographic Area:

 Groundwater
 ✓

 United States
 ✓

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: <u>Next Generation Monitoring Location Page</u>

Search Results -- 1 sites found

Agency code = usgs site_no list =

• 325028103441301

Minimum number of levels = 1

Table of data

Save file of selected sites to local disk for future upload

USGS 325028103441301 17S.32E.11.34332

Lea County, New Mexico
Latitude 32°50'32", Longitude 103°44'24" NAD27
Land-surface elevation 4,095.50 feet above NGVD29
This well is completed in the Other aquifers (N99990THER) national aquifer.
This well is completed in the Ogallala Formation (1210GLL) local aquifer.

Output formats

<u> Tab-separate</u>	<u>d data</u>										
Graph of data	<u>a</u>										
eselect period											
Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water- level approval status

Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water- level approval status
1961-03-10		D	62610		4046.17	NGVD29	1	Z			A
1961-03-10		D	62611		4047.80	NAVD88	1	Z			A
1961-03-10		D	72019	49.33			1	Z			A
1968-07-23		D	62610		4046.16	NGVD29	1	Z			A
1968-07-23		D	62611		4047.79	NAVD88	1	Z			A
1968-07-23		D	72019	49.34			1	Z			A
1971-02-08		D	62610		4048.39	NGVD29	1	Z			A
1971-02-08		D	62611		4050.02	NAVD88	1	Z			A
1971-02-08		D	72019	47.11			1	Z			A
1976-03-01		D	62610		4046.82	NGVD29	1	Z			A
1976-03-01		D	62611		4048.45	NAVD88	1	Z			A
1976-03-01		D	72019	48.68			1	Z			A
1981-01-28		D	62610		4046.27	NGVD29	1	Z			A
1981-01-28		D	62611		4047.90	NAVD88	1	Z			A
1981-01-28		D	72019	49.23			1	Z			Į.
1986-04-02		D	62610		4048.12	NGVD29	1	Z			A
1986-04-02		D	62611		4049.75	NAVD88	1	Z			A
1986-04-02		D	72019	47.38			1	Z			A
1990-12-07		D	62610		4047.50	NGVD29	1	Z			A
1990-12-07		D	62611		4049.13	NAVD88	1	Z			A
1990-12-07		D	72019	48.00			1	Z			A
1996-02-20		D	62610		4047.36	NGVD29	1	S			A
1996-02-20		D	62611		4048.99	NAVD88	1	S			A
1996-02-20		D	72019	48.14			1	S			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet

Section	Code	Description
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	А	Approved for publication Processing and review completed.

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

Accessibility FOIA Privacy Policies and Notices

<u>U.S. Department of the Interior</u> | <u>U.S. Geological Survey</u> **Title: Groundwater for USA: Water Levels**

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

Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2022-12-05 16:16:31 EST

0.28 0.25 nadww01





APPENDIX B

Photographic Log

11/30/2023

ENSOLUM

Photographic Log Maverick Permian, LLC Ruby Federal Incident Number NAPP2231448981



Photograph 1 Date: 11/30/2023 Photograph 2 Date:

Description: View of Release Area.

Nov 30, 2022 [1:29:08 AM 32.8303382[N 103.79190972W 298" NW Unnamed Road Maljamar Lea County New Marjan

Description: View of Release Area.



Photograph 3 Date: 12/19/2023 Photograph 4 Date: 12/28/2023

Description: View of ongoing excavation activities.

Description: View of ongoing excavation activities.

Dec 28, 2022 11:22:38 AM
32.8304117N 103,7918563W
223.5W
Unnamed Road
Maljamar
Lea County

Page 1 of 1

ENSOLUM

APPENDIX C

Laboratory Analytical Results

& Chain-of-Custody Documentation

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 12/23/2022 9:48:10 PM

JOB DESCRIPTION

Ruby Federal SDG NUMBER 03D2057036

JOB NUMBER

890-3612-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 12/23/2022 9:48:10 PM

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

3

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13

14

Client: Ensolum
Project/Site: Ruby Federal
Laboratory Job ID: 890-3612-1
SDG: 03D2057036

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6

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10

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13

14

Definitions/Glossary

Job ID: 890-3612-1 Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Qualifiers

GC VOA

Qualifier **Qualifier Description** Sample was prepped or analyzed beyond the specified holding time

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

Glossary

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

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

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

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

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

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

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

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

Client: Ensolum Job ID: 890-3612-1
Project/Site: Ruby Federal SDG: 03D2057036

Job ID: 890-3612-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3612-1

Receipt

The samples were received on 12/8/2022 3:46 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 2.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-3612-1) and SW01 (890-3612-2).

GC VOA

Method 8021B: The following samples were analyzed outside of analytical holding time due to instrument failure: FS01 (890-3612-1) and SW01 (890-3612-2).

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 880-41626 and analytical batch 880-41693 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3605-A-1-B). 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.

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Matrix: Solid

Lab Sample ID: 890-3612-1

Client Sample Results

Client: EnsolumJob ID: 890-3612-1Project/Site: Ruby FederalSDG: 03D2057036

Client Sample ID: FS01

Date Collected: 12/08/22 12:10 Date Received: 12/08/22 15:46

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	UH	0.00200	mg/Kg		12/22/22 09:05	12/23/22 11:17	1
Toluene	<0.00200	UH	0.00200	mg/Kg		12/22/22 09:05	12/23/22 11:17	1
Ethylbenzene	<0.00200	UH	0.00200	mg/Kg		12/22/22 09:05	12/23/22 11:17	1
m-Xylene & p-Xylene	<0.00399	UH	0.00399	mg/Kg		12/22/22 09:05	12/23/22 11:17	1
o-Xylene	<0.00200	UH	0.00200	mg/Kg		12/22/22 09:05	12/23/22 11:17	1
Xylenes, Total	<0.00399	UH	0.00399	mg/Kg		12/22/22 09:05	12/23/22 11:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			12/22/22 09:05	12/23/22 11:17	1
1,4-Difluorobenzene (Surr)	97		70 - 130			12/22/22 09:05	12/23/22 11:17	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			12/23/22 17:12	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Method: SW846 8015 NM - Diese Analyte		ics (DRO) (GC)	Unit	D	Prepared	Analyzed	Dil Fac
		Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 12/14/22 12:15	Dil Fac
Analyte	Result 53.6	Qualifier	RL 49.9		<u>D</u>	Prepared		
Analyte Total TPH	Result 53.6 sel Range Orga	Qualifier	RL 49.9		<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result 53.6 sel Range Orga	Qualifier nics (DRO) Qualifier	RL 49.9 (GC)	mg/Kg			12/14/22 12:15	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 53.6 sel Range Orga Result	Qualifier nics (DRO) Qualifier U	RL 49.9 (GC)	mg/Kg		Prepared	12/14/22 12:15 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	Result 53.6 sel Range Orga Result <49.9	Qualifier nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9	mg/Kg Unit mg/Kg		Prepared 12/12/22 11:03	12/14/22 12:15 Analyzed 12/13/22 23:54	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 53.6 sel Range Orga Result <49.9 53.6	Qualifier nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 12/12/22 11:03 12/12/22 11:03	12/14/22 12:15 Analyzed 12/13/22 23:54 12/13/22 23:54	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result	Qualifier nics (DRO) Qualifier U	RL 49.9 (GC) RL 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 12/12/22 11:03 12/12/22 11:03	Analyzed 12/13/22 23:54 12/13/22 23:54 12/13/22 23:54	1 Dil Fac

Client Sample ID: SW01 Lab Sample ID: 890-3612-2

Result Qualifier

15.8

Date Collected: 12/08/22 12:30 Date Received: 12/08/22 15:46

Sample Depth: 0 - 4

Analyte

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	UH	0.00199	mg/Kg		12/22/22 09:05	12/23/22 11:38	1
Toluene	<0.00199	UH	0.00199	mg/Kg		12/22/22 09:05	12/23/22 11:38	1
Ethylbenzene	<0.00199	UH	0.00199	mg/Kg		12/22/22 09:05	12/23/22 11:38	1
m-Xylene & p-Xylene	<0.00398	UH	0.00398	mg/Kg		12/22/22 09:05	12/23/22 11:38	1
o-Xylene	<0.00199	UH	0.00199	mg/Kg		12/22/22 09:05	12/23/22 11:38	1
Xylenes, Total	<0.00398	UH	0.00398	mg/Kg		12/22/22 09:05	12/23/22 11:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			12/22/22 09:05	12/23/22 11:38	1

RL

4.99

Unit

mg/Kg

D

Prepared

Analyzed

12/16/22 05:30

Dil Fac

Matrix: Solid

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Client Sample Results

Client: EnsolumJob ID: 890-3612-1Project/Site: Ruby FederalSDG: 03D2057036

Client Sample ID: SW01 Lab Sample ID: 890-3612-2

Date Collected: 12/08/22 12:30

Date Received: 12/08/22 15:46

Matrix: Solid

Sample Depth: 0 - 4

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	94		70 - 130			12/22/22 09:05	12/23/22 11:38	-
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/23/22 17:12	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			12/14/22 12:15	
Gasoline Range Organics (GRO)-C6-C10	<50.0		50.0	mg/Kg	— -	12/12/22 11:03	12/14/22 00:16	DII F
Analyte Gasoline Range Organics		Qualifier U	50.0 RL	Unit mg/Kg	D	Prepared 12/12/22 11:03	Analyzed 12/14/22 00:16	Dil Fa
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		12/12/22 11:03	12/14/22 00:16	
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/12/22 11:03	12/14/22 00:16	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	126		70 - 130			12/12/22 11:03	12/14/22 00:16	
o-Terphenyl	120		70 - 130			12/12/22 11:03	12/14/22 00:16	
Method: MCAWW 300.0 - Anions	•	•						
					_			D:: E-
Analyte	Result	Qualifier	RL 4.97	Unit	D	Prepared	Analyzed 12/16/22 05:37	Dil Fa

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Surrogate Summary

Client: Ensolum Job ID: 890-3612-1 Project/Site: Ruby Federal SDG: 03D2057036

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-22829-A-1-L MS	Matrix Spike	112	118	
880-22829-A-1-M MSD	Matrix Spike Duplicate	110	125	
890-3612-1	FS01	115	97	
890-3612-2	SW01	112	94	
_CS 880-42482/1-A	Lab Control Sample	111	123	
_CSD 880-42482/2-A	Lab Control Sample Dup	114	122	
MB 880-42465/39	Method Blank	87	99	
MB 880-42482/5-A	Method Blank	85	103	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3605-A-1-C MS	Matrix Spike	104	91
890-3605-A-1-D MSD	Matrix Spike Duplicate	94	93
890-3612-1	FS01	103	99
890-3612-2	SW01	126	120
LCS 880-41626/2-A	Lab Control Sample	102	116
LCSD 880-41626/3-A	Lab Control Sample Dup	114	127
MB 880-41626/1-A	Method Blank	152 S1+	207 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-3612-1 Project/Site: Ruby Federal SDG: 03D2057036

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42465/39

Matrix: Solid

Analysis Batch: 42465

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			12/22/22 22:16	1
Toluene	<0.00200	U	0.00200	mg/Kg			12/22/22 22:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			12/22/22 22:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			12/22/22 22:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			12/22/22 22:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			12/22/22 22:16	1

MB MB Qualifier %Recovery Limits Prepared Dil Fac Surrogate Analyzed 70 - 130 12/22/22 22:16 4-Bromofluorobenzene (Surr) 87 99 70 - 130 12/22/22 22:16 1,4-Difluorobenzene (Surr)

Lab Sample ID: MB 880-42482/5-A

Matrix: Solid

Analysis Batch: 42465

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42482

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/22/22 09:05	12/23/22 08:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/22/22 09:05	12/23/22 08:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/22/22 09:05	12/23/22 08:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/22/22 09:05	12/23/22 08:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/22/22 09:05	12/23/22 08:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/22/22 09:05	12/23/22 08:53	1

MB MB %Recovery Qualifier Limits 85 70 - 130 4-Bromofluorobenzene (Surr) 70 - 130 1,4-Difluorobenzene (Surr) 103

MR MR

Prepared Analyzed Dil Fac 12/22/22 09:05 12/23/22 08:53 12/22/22 09:05 12/23/22 08:53

Lab Sample ID: LCS 880-42482/1-A **Matrix: Solid**

Analysis Batch: 42465

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

Prep Batch: 42482

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09914		mg/Kg		99	70 - 130	
Toluene	0.100	0.09794		mg/Kg		98	70 - 130	
Ethylbenzene	0.100	0.1029		mg/Kg		103	70 - 130	
m-Xylene & p-Xylene	0.200	0.2180		mg/Kg		109	70 - 130	
o-Xylene	0.100	0.1087		mg/Kg		109	70 - 130	

	LCS LCS						
Surrogate	%Recovery Qualifie	r Limits					
4-Bromofluorobenzene (Surr)	111	70 - 130					
1,4-Difluorobenzene (Surr)	123	70 - 130					

Lab Sample ID: LCSD 880-42482/2-A

Matrix: Solid

Analysis Batch: 42465

Client Sample ID: Lab Control Sampl	e Dup
Prep Type: To	tal/NA
Prep Batch:	42482

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Benzene 0.100 0.1015 mg/Kg 102 70 - 130 35

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Client: Ensolum Job ID: 890-3612-1
Project/Site: Ruby Federal SDG: 03D2057036

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

Lab Sample ID: LCSD 880-42482/2-A

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Total/NA
Analysis Batch: 42465

Prep Batch: 42482

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.09837		mg/Kg		98	70 - 130	0	35
Ethylbenzene	0.100	0.1044		mg/Kg		104	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2235		mg/Kg		112	70 - 130	3	35
o-Xylene	0.100	0.1112		mg/Kg		111	70 - 130	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	122		70 - 130

Lab Sample ID: 880-22829-A-1-L MS

Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 42465 Prep Batch: 42482

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.0998	0.1044		mg/Kg		105	70 - 130	
Toluene	<0.00201	U	0.0998	0.1011		mg/Kg		101	70 - 130	
Ethylbenzene	<0.00201	U	0.0998	0.1032		mg/Kg		103	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2218		mg/Kg		111	70 - 130	
o-Xylene	<0.00201	U	0.0998	0.1108		mg/Kg		111	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	118		70 - 130

Lab Sample ID: 880-22829-A-1-M MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 42465 Prep Batch: 42482

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.100	0.1133		mg/Kg		113	70 - 130	8	35
Toluene	<0.00201	U	0.100	0.1086		mg/Kg		108	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.100	0.1091		mg/Kg		109	70 - 130	6	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2339		mg/Kg		117	70 - 130	5	35
o-Xylene	<0.00201	U	0.100	0.1174		mg/Kg		117	70 - 130	6	35

	WISD WISD	
Surrogate	%Recovery Qualif	ier Limits
4-Bromofluorobenzene (Surr)	110	70 - 130
1,4-Difluorobenzene (Surr)	125	70 - 130

MSD MSD

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

Lab Sample ID: MB 880-41626/1-A

Matrix: Solid

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

Analysis Batch: 41693 Prep Batch: 41626

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		12/12/22 11:03	12/13/22 19:51	1
(GRO)-C6-C10								

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Client: Ensolum Job ID: 890-3612-1
Project/Site: Ruby Federal SDG: 03D2057036

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

Lab Sample ID: MB 880-41626/1-A

Matrix: Solid

Analysis Batch: 41693

Prep Batch: 41626

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/12/22 11:03	12/13/22 19:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/12/22 11:03	12/13/22 19:51	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	152	S1+	70 - 130			12/12/22 11:03	12/13/22 19:51	1
o-Terphenyl	207	S1+	70 - 130			12/12/22 11:03	12/13/22 19:51	1

Lab Sample ID: LCS 880-41	626/2-A						Client	Sample	ID: Lab Contro	ol Sample
Matrix: Solid									Prep Type	: Total/NA
Analysis Batch: 41693									Prep Bat	ch: 41626
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	811.3		mg/Kg		81	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	825.1		mg/Kg		83	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	102		70 - 130							
o-Terphenyl	116		70 - 130							

Matrix: Solid							Prep 1	Гуре: То	tal/NA
Analysis Batch: 41693							Prep	Batch:	41626
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	928.5		mg/Kg		93	70 - 130	13	20
(GRO)-C6-C10									

910.5

mg/Kg

1000

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: 890-3605-A- Matrix: Solid Analysis Batch: 41693	-1-C MS							Client	Prep Ty	Matrix Spike pe: Total/NA Batch: 41626
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	939.4		mg/Kg		92	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	999	1020		mg/Kg		102	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	104		70 - 130							
o-Terphenyl	91		70 - 130							

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Client Sample ID: Lab Control Sample Dup

70 - 130

Lab Sample ID: LCSD 880-41626/3-A

Diesel Range Organics (Over

C10-C28)

Job ID: 890-3612-1 Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

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

MSD MSD

Lab Sample ID: 890-3605-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA Prep Batch: 41626

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Analysis Batch: 41693 Sample Sample MSD MSD RPD Spike Result Qualifier Analyte Added Result Qualifier %Rec Limits RPD Limit Unit Gasoline Range Organics <50.0 U 997 910.9 mg/Kg 89 70 - 130 3 20 (GRO)-C6-C10

Diesel Range Organics (Over C10-C28)

997 1037 104 70 - 130 <50.0 U mg/Kg 2 20

%Recovery Surrogate

Qualifier Limits 1-Chlorooctane 70 - 130 94 o-Terphenyl 93 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41479/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41945

MB MB

Result Qualifier RL Unit Analyte Prepared Analyzed Dil Fac Chloride <5.00 5.00 mg/Kg 12/16/22 02:07

Lab Sample ID: LCS 880-41479/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 41945

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 253.5 90 - 110 mg/Kg 101

Lab Sample ID: LCSD 880-41479/3-A

Matrix: Solid

Analysis Batch: 41945

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	251.3		ma/Ka		101	90 - 110		20

Lab Sample ID: 880-22542-A-1-C MS

Matrix: Solid

Analysis Batch: 41945

Sample Sample Spike MS MS %Rec Qualifier Added Qualifier Analyte Result Result %Rec Limits Unit Chloride 249 103 90 - 110 30.6 288.2 mg/Kg

Lab Sample ID: 880-22542-A-1-D MSD

Matrix: Solid

Analysis Ratch: 41945

Analysis Batch: 41945											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	30.6		249	288.7		mg/Kg		104	90 - 110	0	20

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QC Association Summary

Client: Ensolum Job ID: 890-3612-1 Project/Site: Ruby Federal SDG: 03D2057036

GC VOA

Analysis Batch: 42465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3612-1	FS01	Total/NA	Solid	8021B	42482
890-3612-2	SW01	Total/NA	Solid	8021B	42482
MB 880-42465/39	Method Blank	Total/NA	Solid	8021B	
MB 880-42482/5-A	Method Blank	Total/NA	Solid	8021B	42482
LCS 880-42482/1-A	Lab Control Sample	Total/NA	Solid	8021B	42482
LCSD 880-42482/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42482
880-22829-A-1-L MS	Matrix Spike	Total/NA	Solid	8021B	42482
880-22829-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	42482

Prep Batch: 42482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3612-1	FS01	Total/NA	Solid	5035	 :
890-3612-2	SW01	Total/NA	Solid	5035	
MB 880-42482/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42482/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42482/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-22829-A-1-L MS	Matrix Spike	Total/NA	Solid	5035	
880-22829-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 42577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3612-1	FS01	Total/NA	Solid	Total BTEX	
890-3612-2	SW01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 41626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3612-1	FS01	Total/NA	Solid	8015NM Prep	
890-3612-2	SW01	Total/NA	Solid	8015NM Prep	
MB 880-41626/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41626/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41626/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3605-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3605-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3612-1	FS01	Total/NA	Solid	8015B NM	41626
890-3612-2	SW01	Total/NA	Solid	8015B NM	41626
MB 880-41626/1-A	Method Blank	Total/NA	Solid	8015B NM	41626
LCS 880-41626/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41626
LCSD 880-41626/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41626
890-3605-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	41626
890-3605-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	41626

Analysis Batch: 41816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3612-1	FS01	Total/NA	Solid	8015 NM	<u></u> _
890-3612-2	SW01	Total/NA	Solid	8015 NM	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: Ruby Federal
SDG: 03D2057036

HPLC/IC

Leach Batch: 41479

Lab Sample ID	ab Sample ID Client Sample ID		Matrix	Method	Prep Batch
890-3612-1	FS01	Soluble	Solid	DI Leach	
890-3612-2	SW01	Soluble	Solid	DI Leach	
MB 880-41479/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41479/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41479/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22542-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22542-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 41945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3612-1	FS01	Soluble	Solid	300.0	41479
890-3612-2	SW01	Soluble	Solid	300.0	41479
MB 880-41479/1-A	Method Blank	Soluble	Solid	300.0	41479
LCS 880-41479/2-A	Lab Control Sample	Soluble	Solid	300.0	41479
LCSD 880-41479/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41479
880-22542-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	41479
880-22542-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41479

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Client: Ensolum Job ID: 890-3612-1 Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: FS01 Lab Sample ID: 890-3612-1

Date Collected: 12/08/22 12:10 Matrix: Solid Date Received: 12/08/22 15:46

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	42482	12/22/22 09:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42465	12/23/22 11:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42577	12/23/22 17:12	AJ	EET MID
Total/NA	Analysis	8015 NM		1			41816	12/14/22 12:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	41626	12/12/22 11:03	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41693	12/13/22 23:54	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41479	12/09/22 13:24	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	41945	12/16/22 05:30	CH	EET MID

Client Sample ID: SW01 Lab Sample ID: 890-3612-2

Date Collected: 12/08/22 12:30 Matrix: Solid Date Received: 12/08/22 15:46

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	42482	12/22/22 09:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42465	12/23/22 11:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42577	12/23/22 17:12	AJ	EET MID
Total/NA	Analysis	8015 NM		1			41816	12/14/22 12:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	41626	12/12/22 11:03	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41693	12/14/22 00:16	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	41479	12/09/22 13:24	KS	EET MIC
Soluble	Analysis	300.0		1	50 mL	50 mL	41945	12/16/22 05:37	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-3612-1
Project/Site: Ruby Federal SDG: 03D2057036

Laboratory: Eurofins Midland

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

Authority	Pr	ogram	Identification Number	Expiration Date 06-30-23	
Texas	NE	ELAP	T104704400-22-25		
The following analytes	are included in this report by	it the laboratory is not certific	ed by the governing authority. This list ma	v include analytes for y	
the agency does not of		at the laboratory is not contin	ed by the governing additionty. This list his	dy include analytes for	
0 ,		Matrix	Analyte	ay include analytes for t	
the agency does not of	fer certification.	•	, , ,		

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Method Summary

Job ID: 890-3612-1 Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

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

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

Sample Summary

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3612-1

SDG: 03D2057036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3612-1	FS01	Solid	12/08/22 12:10	12/08/22 15:46	4
890-3612-2	SW01	Solid	12/08/22 12:30	12/08/22 15:46	0 - 4

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

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. Rassigns standard terms and conditions

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

Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se

Ag SiO2 Na Sr TI Sn U V Zn Hg: 1631 / 245.1 / 7470

17471

eurofin

Project Manager:

Company Name:

			itification		als: Y	s:	ntact:	PT		ر	32,8	255	0 J.W	303-517-8437	Midland, TX 79701	601 N Marienfeld St Suite 400	Ensolum, LLC	Josh Adams		fins
					Yes No	Yes No	(kes)	Temp Blank:		Julianna Falcomata	8302, -118,7919	N 85-	DU FRO	-8437	TX 797	larienfeld), LLC	ams	Xe	m
	N	0	Matrix		NA	NA	No			Falcom	18,70	7136	devolution		01	d St Su			Xenco	viron
	24-72	12-8-22	Date Sampled	Corrected Temperature:	N/A Temperature Reading:	N/A Correction Factor:	Thermometer ID:	(Yes No	>	ata	119	0				ite 400				Environment Testing
	1280	1216	Time Sampled	emperature:	Reading:	actor:	yr ID:	Wet ice:	the lab, if re	TAT starts th	Due Date:	☑ Routine	Turi	Email						sting
	0-41	7	Depth Cc	8,2	جو ع.	<0.0	FORM	Cycles No	the lab, if received by 4:30pm	TAT starts the day received by		☐ Rush	Turn Around	Email: kjennings@ensolum.com, jadams@ensolum.com	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	_ m	Mic _
-	16		Grab/ # of Comp Cont			Pa	arar	nete		Ьу		Pres. Code		ensolu	IP.		ame:	erent)	L Paso, 1	Houston,
\dagger		<	CHLO	RIDE	S (E	PA:	300	0.0)				ō .		m.com	Midla	601	Enso	Kalei	X (915) (hai Tx (281) (432) 70
	-	1	TPH (8	015)										jadan	Midland, TX 79701	Marie V	Ensolum, LLC	Kalei Jennings	585-344 92-7550	n o: 240-420
	\	1	ВТЕХ	802	1									ns@enso	79701	601 N Marienfeld St Suite 400	C	gs	3, Lubbock Carlsbad,	Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 idland, TX (432) 704-5440. San Antonio, TX (210) 509-33
+									-					olum.co		uite 400			NM (575	Stod TX (214
				_	890-3612 Chain of Custody								ANALYSIS REQUEST	В					EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
				_	in of Custody								DUEST	Deliverables: EDD	Reporting: Level II Level II	State of Project:	Program: UST/PST PRP	Work	www.xenco.com	Work Order No:
	91.97.11.057.2. ATHU	5	Sample Comments	NaOH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	Na ₂ S ₂ O ₃ : NaSO ₃	NaHSO ₄ : NABIS	H ₃ PO ₄ : HP	H ₂ S0 ₄ : H ₂ NaOH: Na	HCL: HC HNO3: HN	<u> </u>	None: NO DI Water: H ₂ O	Preservative Codes	ADaPT Other:	Reporting: Level II PST/UST TRRP Level IV		Program: UST/PST \square PRP \square Brownfields \square RRC \square Superfund \square	Work Order Comments	nco.com Page or (der No:
			Page	e 1	9 c	of 2	1.1													12/23/20

Sampler's Name:

Project Location:

SAMPLE RECEIPT

Total Containers: Sample Custody Seals: Cooler Custody Seals: Samples Received Intact

Sample Identifica

Project Number:

Project Name:

Phone

y, State ZIP: Address:

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3612-1 SDG Number: 03D2057036

Login Number: 3612 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3612-1 SDG Number: 03D2057036

Login Number: 3612 **List Source: Eurofins Midland** List Number: 2

List Creation: 12/12/22 08:01 AM

Creator: Rodriguez, Leticia

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

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 12/29/2022 1:23:39 PM

JOB DESCRIPTION

Ruby Federal SDG NUMBER 32.210278,-103.72500

JOB NUMBER

890-3682-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 12/29/2022 1:23:39 PM

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

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

Page 2 of 23

Client: Ensolum Project/Site: Ruby Federal Laboratory Job ID: 890-3682-1 SDG: 32.210278,-103.72500

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Definitions/Glossary

 Client: Ensolum
 Job ID: 890-3682-1

 Project/Site: Ruby Federal
 SDG: 32.210278,-103.72500

Qualifiers

GC VOA Qualifier

F1 MS and/or MSD recovery exceeds control limits.

Qualifier Description

F2 MS/MSD RPD exceeds control limits

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier Description

*1 LCS/LCSD RPD exceeds control limits.
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

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.

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

%R Percent Recovery

CFL Contains Free Liquid

CFU Colony Forming Unit

CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

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

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

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

NC Not Calculated

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

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

TNTC Too Numerous To Count

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Case Narrative

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3682-1

SDG: 32.210278,-103.72500

Job ID: 890-3682-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3682-1

Receipt

The samples were received on 12/19/2022 4:16 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 1.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS02 (890-3682-1) and FS03 (890-3682-2).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-42724 and analytical batch 880-42777 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-42467 and analytical batch 880-42459 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-42831 and analytical batch 880-42773 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-42831 and analytical batch 880-42773 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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 880-42386 and analytical batch 880-42572 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Matrix: Solid

Lab Sample ID: 890-3682-1

Client Sample Results

 Client: Ensolum
 Job ID: 890-3682-1

 Project/Site: Ruby Federal
 SDG: 32.210278,-103.72500

Client Sample ID: FS02

Date Collected: 12/19/22 12:30 Date Received: 12/19/22 16:16

Sample Depth: 4"

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 14:04	12/29/22 03:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 14:04	12/29/22 03:48	1
Ethylbenzene	0.00639		0.00200	mg/Kg		12/27/22 14:04	12/29/22 03:48	1
m-Xylene & p-Xylene	0.00677		0.00401	mg/Kg		12/27/22 14:04	12/29/22 03:48	1
o-Xylene	0.00503		0.00200	mg/Kg		12/27/22 14:04	12/29/22 03:48	1
Xylenes, Total	0.0118		0.00401	mg/Kg		12/27/22 14:04	12/29/22 03:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130			12/27/22 14:04	12/29/22 03:48	1
1,4-Difluorobenzene (Surr)	81		70 - 130			12/27/22 14:04	12/29/22 03:48	1

Method: TAL SOP Total BTEX - Tot	al BIEX Calculation						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0182	0.00401	mg/Kg			12/29/22 11:42	1

Method: SW846 8015 NM - Diesel R	ange Organics (DRO) (GC)					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1990	49.9	mg/Kg			12/27/22 11:28	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/22/22 07:58	12/22/22 18:24	1
Diesel Range Organics (Over C10-C28)	1990		49.9	mg/Kg		12/22/22 07:58	12/22/22 18:24	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/22/22 07:58	12/22/22 18:24	1

Surrogate	%Recovery	Qualifier L	imits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88	7	0 - 130	 12/22/22 07:58	12/22/22 18:24	1
1-Chlorooctane	89	7	0 - 130	12/22/22 07:58	12/22/22 18:46	1
o-Terphenyl	83	7	0 - 130	12/22/22 07:58	12/22/22 18:24	1
o-Terphenyl	84	7	0 - 130	12/22/22 07:58	12/22/22 18:46	1

Method: MCAWW 300.0 - Anions, le	on Chromatography - So	luble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1770	25.0	mg/Kg			12/23/22 18:41	5

Client Sample ID: FS03

Lab Sample ID: 890-3682-2

Date Collected: 12/19/22 14:00

Matrix: Solid

Date Received: 12/19/22 16:16

Sample Depth: 4"

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	\overline{U}	0.00202	mg/Kg		12/27/22 14:04	12/29/22 04:09	1
Toluene	<0.00202	U	0.00202	mg/Kg		12/27/22 14:04	12/29/22 04:09	1
Ethylbenzene	0.00580		0.00202	mg/Kg		12/27/22 14:04	12/29/22 04:09	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		12/27/22 14:04	12/29/22 04:09	1
o-Xylene	0.00441		0.00202	mg/Kg		12/27/22 14:04	12/29/22 04:09	1
Xylenes, Total	0.00441		0.00403	mg/Kg		12/27/22 14:04	12/29/22 04:09	1

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Client Sample Results

Client: Ensolum Job ID: 890-3682-1 Project/Site: Ruby Federal SDG: 32.210278,-103.72500

Client Sample ID: FS03 Lab Sample ID: 890-3682-2

Date Collected: 12/19/22 14:00 Matrix: Solid Date Received: 12/19/22 16:16

Sample Depth: 4"

Chloride

MELIIOG. MOATTY 300.0 - AIIIOIIS	, ion omomato	grapily - ot	Jiubie					
Method: MCAWW 300.0 - Anions	Ion Chromato	aranhy - Se	oluble					
o-Terphenyl	264	S1+	70 - 130			12/28/22 17:11	12/29/22 08:49	
1-Chlorooctane	240	S1+	70 - 130			12/28/22 17:11	12/29/22 08:49	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
C28-C36)								
Oll Range Organics (Over	438		249	mg/Kg		12/28/22 17:11	12/29/22 08:49	
C10-C28)				0 0				
Diesel Range Organics (Over	3310		249	mg/Kg		12/28/22 17:11	12/29/22 08:49	
(GRO)-C6-C10	~249	0 1	249	mg/Kg		12/20/22 17.11	12/29/22 00.49	
Gasoline Range Organics	- <249		249	mg/Kg		12/28/22 17:11	12/29/22 08:49	
Method: SW846 8015B NM - Dies Analyte		nics (DRO) Qualifier	(GC)	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	3750		249	mg/Kg			12/29/22 13:59	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Total BTEX	0.0102		0.00403	mg/Kg			12/29/22 11:42	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
1,4-Difluorobenzene (Surr)	102		70 - 130			12/27/22 14:04	12/29/22 04:09	
4-Bromofluorobenzene (Surr)	105		70 - 130			12/27/22 14:04	12/29/22 04:09	
	_ <u> </u>	Qualifier	Limits			Prepared	Analyzed	Dil Fa

24.8

mg/Kg

2610

12/23/22 18:46

Surrogate Summary

Client: Ensolum Job ID: 890-3682-1 Project/Site: Ruby Federal SDG: 32.210278,-103.72500

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)	
880-22914-A-1-B MS	Matrix Spike	99	103	
880-22914-A-1-C MSD	Matrix Spike Duplicate	105	108	
890-3682-1	FS02	81	81	
890-3682-2	FS03	105	102	
LCS 880-42724/1-A	Lab Control Sample	99	103	
LCSD 880-42724/2-A	Lab Control Sample Dup	99	108	
MB 880-42718/5-A	Method Blank	95	108	
MB 880-42724/5-A	Method Blank	96	106	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Accepta
		1CO1	OTPH1	
Lab Sample ID C	lient Sample ID	(70-130)	(70-130)	
880-23018-A-1-D MS	latrix Spike	118	94	
880-23018-A-1-E MSD N	latrix Spike Duplicate	119	93	
880-23046-A-1-I MS N	latrix Spike	113	110	
880-23046-A-1-J MSD N	latrix Spike Duplicate	98	96	
90-3682-1 F	S02	88	83	
390-3682-1 F	S02	89	84	
90-3682-2 F	S03	240 S1+	264 S1+	
CS 880-42467/2-A L	ab Control Sample	106	117	
.CS 880-42831/2-A L	ab Control Sample	104	115	
_CSD 880-42467/3-A L	ab Control Sample Dup	106	99	
LCSD 880-42831/3-A	ab Control Sample Dup	92	105	
MB 880-42467/1-A N	lethod Blank	142 S1+	141 S1+	
MB 880-42831/1-A M	lethod Blank	105	116	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3682-1 SDG: 32.210278,-103.72500 Project/Site: Ruby Federal

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42718/5-A

Matrix: Solid Analysis Batch: 42777 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 42718

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 13:34	12/28/22 12:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 13:34	12/28/22 12:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 13:34	12/28/22 12:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/27/22 13:34	12/28/22 12:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 13:34	12/28/22 12:38	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/27/22 13:34	12/28/22 12:38	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Pro	epared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	12/27	7/22 13:34	12/28/22 12:38	1
1,4-Difluorobenzene (Surr)	108		70 - 130	12/27	/22 13:34	12/28/22 12:38	1

Lab Sample ID: MB 880-42724/5-A

Client Sample ID: Method Blank

	Choire Campio 121 motifica 2 marit
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 42777	Prep Batch: 42724
MB MB	

Analyte	Result (Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	U	0.00200	mg/Kg		12/27/22 14:04	12/29/22 00:36	1
Toluene	<0.00200 l	U	0.00200	mg/Kg		12/27/22 14:04	12/29/22 00:36	1
Ethylbenzene	<0.00200 l	U	0.00200	mg/Kg		12/27/22 14:04	12/29/22 00:36	1
m-Xylene & p-Xylene	<0.00400 U	U	0.00400	mg/Kg		12/27/22 14:04	12/29/22 00:36	1
o-Xylene	<0.00200 l	U	0.00200	mg/Kg		12/27/22 14:04	12/29/22 00:36	1
Xylenes, Total	<0.00400 l	U	0.00400	mg/Kg		12/27/22 14:04	12/29/22 00:36	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	12/27/22 14:04	12/29/22 00:36	1
1,4-Difluorobenzene (Surr)	106		70 - 130	12/27/22 14:04	12/29/22 00:36	1

Lab Sample ID: LCS 880-42724/1-A

Matrix: Solid

Analysis Batch: 42777

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 42724

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1018		mg/Kg		102	70 - 130	
Toluene	0.100	0.09269		mg/Kg		93	70 - 130	
Ethylbenzene	0.100	0.09125		mg/Kg		91	70 - 130	
m-Xylene & p-Xylene	0.200	0.1875		mg/Kg		94	70 - 130	
o-Xylene	0.100	0.09108		mg/Kg		91	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	99	70 _ 130
1.4-Difluorobenzene (Surr)	103	70 - 130

Lab Sample ID: LCSD 880-42724/2-A

Matrix: Solid

Analysis Batch: 42777

Client	Sample	ID:	Lab	Cont	rol	Sam	ole	Dup	3
				_	_	_			_

Prep Type: Total/NA

Prep Batch: 42724

	Spike	LCSD LCSD				70 Rec		KFD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09175	mg/Kg		92	70 - 130	10	35

LCCD LCCD

Cnika

QC Sample Results

Client: Ensolum Job ID: 890-3682-1 Project/Site: Ruby Federal SDG: 32.210278,-103.72500

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

Lab Sample ID: LCSD 880-42724/2-A **Matrix: Solid**

Analysis Batch: 42777

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 42724

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08529		mg/Kg		85	70 - 130	8	35
Ethylbenzene	0.100	0.08200		mg/Kg		82	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.1694		mg/Kg		85	70 - 130	10	35
o-Xylene	0.100	0.08393		mg/Kg		84	70 - 130	8	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 880-22914-A-1-B MS

Matrix: Solid

Analysis Batch: 42777

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 42724

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F2 F1	0.101	0.03759	F1	mg/Kg		37	70 - 130	
Toluene	<0.00201	U F2 F1	0.101	0.03465	F1	mg/Kg		34	70 - 130	
Ethylbenzene	<0.00201	U F2 F1	0.101	0.03505	F1	mg/Kg		35	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.202	0.07396	F1	mg/Kg		37	70 - 130	
o-Xylene	<0.00201	U F2 F1	0.101	0.03896	F1	mg/Kg		39	70 - 130	

MS MS

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

Lab Sample ID: 880-22914-A-1-C MSD

Matrix: Solid

Analysis Batch: 42777

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 42724

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F2 F1	0.0990	0.05892	F2 F1	mg/Kg		60	70 - 130	44	35
Toluene	<0.00201	U F2 F1	0.0990	0.05349	F2 F1	mg/Kg		54	70 - 130	43	35
Ethylbenzene	<0.00201	U F2 F1	0.0990	0.05150	F2 F1	mg/Kg		52	70 - 130	38	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.198	0.1100	F2 F1	mg/Kg		56	70 - 130	39	35
o-Xylene	<0.00201	U F2 F1	0.0990	0.05686	F2 F1	mg/Kg		57	70 - 130	37	35

MSD MSD

Surrogate	76Recovery	Qualifier	LIIIIII
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

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

Lab Sample ID: MB 880-42467/1-A

Matrix: Solid

Analysis Batch: 42459

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

Prep Batch: 42467

	MB MB						
Analyte	Result Qua	alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0 U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
(GRO)-C6-C10							

Client: Ensolum

o-Terphenyl

o-Terphenyl

C10-C28)

Project/Site: Ruby Federal

Job ID: 890-3682-1

SDG: 32.210278,-103.72500

12/22/22 08:06

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

12/22/22 07:58

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

Lab Sample ID: MB 880-42467/1-A

Matrix: Solid

Analysis Batch: 42459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42467

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/22/22 07:58	12/22/22 08:06	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	142	S1+	70 - 130			12/22/22 07:58	12/22/22 08:06	1

70 - 130

Lab Sample ID: LCS 880-42467/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Prep Batch: 42467 Analysis Batch: 42459 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1044 104 70 - 130 mg/Kg (GRO)-C6-C10 1000 Diesel Range Organics (Over 1016 mg/Kg 102 70 - 130 C10-C28) LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 106

70 - 130

Lab Sample ID: LCSD 880-42467/3-A Matrix: Solid

117

141 S1+

Analysis Batch: 42459 Prep Batch: 42467 Spike LCSD LCSD %Rec RPD Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Gasoline Range Organics 1000 899.3 90 70 - 130 20 mg/Kg 15 (GRO)-C6-C10 Diesel Range Organics (Over 1000 881.2 mg/Kg 88 70 - 130 14 20

 Surrogate
 %Recovery
 Qualifier
 Limits

 1-Chlorooctane
 106
 70 - 130

 o-Terphenyl
 99
 70 - 130

Lab Sample ID: 880-23018-A-1-D MS

Matrix: Solid

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

Analysis Batch: 42459

Sample Sample Spike MS MS MS %Rec

Analyte	Result (Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<50.0 l	J	999	1193		mg/Kg		116	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<50.0 l	J	999	981.3		mg/Kg		98	70 - 130	
C10-C28)										

	IVIS	IVIS		
Surrogate	%Recovery	Qualifier	Limits	
1-Chlorooctane	118		70 - 130	
o-Terphenyl	94		70 - 130	

Job ID: 890-3682-1

Client: Ensolum Project/Site: Ruby Federal SDG: 32.210278,-103.72500

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

Lab Sample ID: 880-23018-A-1-E MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA Analysis Batch: 42459 Prep Batch: 42467

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<50.0	U	997	1200		mg/Kg		117	70 - 130	1	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	997	976.0		mg/Kg		98	70 - 130	1	20

C10-C28)

MSD MSD %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 119 o-Terphenyl 93 70 - 130

Lab Sample ID: MB 880-42831/1-A Client Sample ID: Method Blank

Analysis Batch: 42773

Matrix: Solid Prep Type: Total/NA

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		12/28/22 17:11	12/29/22 03:03	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		12/28/22 17:11	12/29/22 03:03	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/28/22 17:11	12/29/22 03:03	1

MB MB %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 1-Chlorooctane 105 70 - 130 12/28/22 17:11 12/29/22 03:03 o-Terphenyl 116 70 - 130 12/28/22 17:11 12/29/22 03:03

Lab Sample ID: LCS 880-42831/2-A

Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA Analysis Batch: 42773 Prep Batch: 42831 Snike LCS LCS

	Орікс		200			701100	
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1002	mg/Kg	_	100	70 - 130	
(GRO)-C6-C10							
Diesel Range Organics (Over	1000	1077	mg/Kg		108	70 - 130	
C10-C28)							

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	115		70 - 130

Lab Sample ID: LCSD 880-42831/3-A

Matrix: Solid

Analysis Batch: 42773							Prep	Batch:	42831
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	767.2	*1	mg/Kg		77	70 - 130	27	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	982.8		mg/Kg		98	70 - 130	9	20
C10-C28)									

Eurofins Carlsbad

Prep Batch: 42831

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Job ID: 890-3682-1

Client: Ensolum Project/Site: Ruby Federal SDG: 32.210278,-103.72500

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

LCSD LCSD

Lab Sample ID: LCSD 880-42831/3-A

Matrix: Solid

Analysis Batch: 42773

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 42831

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 92 70 - 130 o-Terphenyl 105 70 - 130

Lab Sample ID: 880-23046-A-1-I MS

Analysis Batch: 42773

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

Prep Batch: 42831

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	1173		mg/Kg		113	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	1351	F1	mg/Kg		132	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 113 110 70 - 130 o-Terphenyl

Lab Sample ID: 880-23046-A-1-J MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA

999

Analysis Batch: 42773

Diesel Range Organics (Over

Prep Batch: 42831 Spike MSD MSD Sample Sample Added Result Qualifier Analyte Result Qualifier Unit %Rec Limits RPD Limit D Gasoline Range Organics <49.9 U *1 999 1034 mg/Kg 99 70 - 130 13 20 (GRO)-C6-C10

1204

mg/Kg

117

70 - 130

11

20

C10-C28)

MSD MSD %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 98 o-Terphenyl 96 70 - 130

<49.9 UF1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42386/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 42572

MB MB Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 12/23/22 17:27

Lab Sample ID: LCS 880-42386/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 42572

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	241.3		mg/Kg		97	90 - 110	

QC Sample Results

Client: Ensolum Job ID: 890-3682-1 Project/Site: Ruby Federal SDG: 32.210278,-103.72500

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-42386/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 42572

		Spike	LCSD	LCSD				%Rec		RPD	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride		250	268.9		mg/Kg		108	90 - 110	11	20	

Lab Sample ID: 880-22954-A-1-E MS Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 42572

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	280	F1	250	495.4	F1	mg/Kg		86	90 - 110	

Lab Sample ID: 880-22954-A-1-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Soluble

Analysis Batch: 42572

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	280	F1	250	522.1		mg/Kg		97	90 - 110	5	20

QC Association Summary

 Client: Ensolum
 Job ID: 890-3682-1

 Project/Site: Ruby Federal
 SDG: 32.210278,-103.72500

GC VOA

Prep Batch: 42718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42718/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 42724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Total/NA	Solid	5035	
890-3682-2	FS03	Total/NA	Solid	5035	
MB 880-42724/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42724/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42724/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-22914-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-22914-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 42777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Total/NA	Solid	8021B	42724
890-3682-2	FS03	Total/NA	Solid	8021B	42724
MB 880-42718/5-A	Method Blank	Total/NA	Solid	8021B	42718
MB 880-42724/5-A	Method Blank	Total/NA	Solid	8021B	42724
LCS 880-42724/1-A	Lab Control Sample	Total/NA	Solid	8021B	42724
LCSD 880-42724/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42724
880-22914-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	42724
880-22914-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	42724

Analysis Batch: 42879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Total/NA	Solid	Total BTEX	
890-3682-2	FS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Total/NA	Solid	8015B NM	42467
890-3682-1	FS02	Total/NA	Solid	8015B NM	42467
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015B NM	42467
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42467
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42467
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	42467
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42467

Prep Batch: 42467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Total/NA	Solid	8015NM Prep	
890-3682-1	FS02	Total/NA	Solid	8015NM Prep	
MB 880-42467/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42467/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42467/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23018-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23018-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-3682-1

 Project/Site: Ruby Federal
 SDG: 32.210278,-103.72500

GC Semi VOA

Analysis Batch: 42697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Total/NA	Solid	8015 NM	
890-3682-2	FS03	Total/NA	Solid	8015 NM	

Analysis Batch: 42773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-2	FS03	Total/NA	Solid	8015B NM	42831
MB 880-42831/1-A	Method Blank	Total/NA	Solid	8015B NM	42831
LCS 880-42831/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42831
LCSD 880-42831/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42831
880-23046-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	42831
880-23046-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42831

Prep Batch: 42831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-2	FS03	Total/NA	Solid	8015NM Prep	
MB 880-42831/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42831/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42831/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23046-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23046-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 42386

Γ					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Soluble	Solid	DI Leach	
890-3682-2	FS03	Soluble	Solid	DI Leach	
MB 880-42386/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42386/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42386/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22954-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22954-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3682-1	FS02	Soluble	Solid	300.0	42386
890-3682-2	FS03	Soluble	Solid	300.0	42386
MB 880-42386/1-A	Method Blank	Soluble	Solid	300.0	42386
LCS 880-42386/2-A	Lab Control Sample	Soluble	Solid	300.0	42386
LCSD 880-42386/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42386
880-22954-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	42386
880-22954-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	42386

Client: Ensolum

Job ID: 890-3682-1

Project/Site: Ruby Federal SDG: 32.210278,-103.72500

Client Sample ID: FS02 Lab Sample ID: 890-3682-1 Date Collected: 12/19/22 12:30

Matrix: Solid

Date Received: 12/19/22 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	42724	12/27/22 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42777	12/29/22 03:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42879	12/29/22 11:42	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42697	12/27/22 11:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42467	12/22/22 07:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42459	12/22/22 18:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42467	12/22/22 07:58	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42459	12/22/22 18:46	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	42386	12/21/22 10:14	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42572	12/23/22 18:41	CH	EET MID

Client Sample ID: FS03 Lab Sample ID: 890-3682-2

Date Collected: 12/19/22 14:00 Matrix: Solid Date Received: 12/19/22 16:16

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	42724	12/27/22 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42777	12/29/22 04:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42879	12/29/22 11:42	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42697	12/29/22 13:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42831	12/28/22 17:11	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	42773	12/29/22 08:49	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	42386	12/21/22 10:14	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42572	12/23/22 18:46	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-3682-1

 Project/Site: Ruby Federal
 SDG: 32.210278,-103.72500

Laboratory: Eurofins Midland

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

Authority	Program NELAP		Identification Number	Expiration Date	
Texas			T104704400-22-25	06-30-23	
The following analytes	are included in this report by	it the leberatory is not contiffi	iad butba gaugeming authority. This list ma		
the agency does not of		it the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for v	
,		Matrix	Analyte	ay include analytes for v	
the agency does not of	fer certification.	•	, , ,	ay include analytes for v	

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Method Summary

 Client: Ensolum
 Job ID: 890-3682-1

 Project/Site: Ruby Federal
 SDG: 32.210278,-103.72500

Method	Method Description	Protocol	Laboratory
3021B	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
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
00.0	Anions, Ion Chromatography	MCAWW	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID

Protocol References:

DI Leach

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Deionized Water Leaching Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3682-1

SDG: 32.210278,-103.72500

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Dept
890-3682-1	FS02	Solid	12/19/22 12:30	12/19/22 16:16	4"
890-3682-2	FS03	Solid	12/19/22 14:00	12/19/22 16:16	4"

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

Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471 and conditions nd the control of the contro	3.19:53 14 170	Q	AND AND		
Se Ag SiO ₂ Na Sr Tl Sn U V Z Hg: 1631 / 245.1 / 7470 / 747 ⁻	Ī	10	NO COL		
Se Ag SiO ₂ Na Sr Tl Sn U V 2 Hg: 1631 / 245.1 / 7470 / 747'		10.10	100111		
Se Ag SiO ₂ Na Sr Tl Sn U V Hg: 1631 / 245.1 / 7470 / 747	Date/Time Relinquished by: (Signature)	e) [A Received by: (Signature)	ignature)	Relinquished by: (Signature)
Hg: 1631/245.1/7470/747	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.	onsibility for any losses or expenses for each sample submitted to Euro	mples and shall not assume any respect to each project and a charge of \$:	e liable only for the cost of sar charge of \$85.00 will be applie	vice. Eurofins Xenco will b
Ag SiO ₂ Na Sr Tl Sn U V	Notice: Signature of this document and relinguishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	der from client company to Eurofins	mples constitutes a valid purchase or	ent and relinguishment of sam	Signature of this docum
	Ba Be B Cd Ca Cr Co Cu Fe Pb Mg s Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	PM Texas 11 Al Sb As	8RCR	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010
	V V V	4		S)	80%
DAPP223/744646		4'0 1	12	S	2003
Sample Comments	\$ Q	Depth Comp Cont	Date Time Sampled Sampled	ation Matrix	Sample Identification
NaOH+Ascorbic Acid: SAPC	BIENNI	- 8	Corrected Temperature:		Total Containers:
-		ပ ဝ	Temperature Reading:	N _O	Sample Custody Seals:
in of Custody Na ₂ S ₂ O ₃ : NaSO ₃	890-3682 Chain of	0.0	"	Yes No	Cooler Custody Seals:
H ₃ PO ₄ : HP NaHSO ₄ : NABIS	5	Yes No	Thermometer ID: Wet Ice:	Temp Blank:	SAMPLE RECEIPT
H ₂ SO ₄ : H ₂ NaOH: Na		L			PO #:
		TAT starts the day received by		- tallogmoster	Sampler's Name:
<u>o</u>		8 12-72-72	2.210278 -105.7275 mae Date:	2,210278-	Project Location:
None: NO DI Water: H ₂ O		ine Rush Code	Rout	360150488	ber:
Preservative Codes	ANALYSIS REQUEST	Around 3 Tun		Ruby Federal	Project Name:
Deliverable: EDD ADaPT Other:	Hiennings Eve	mountains smolosy	487 Email:	508-017-8467	Phone:
SI		City, State ZIP:	NM 88220	Cartsbook	City, State ZIP:
	8122 Nath Darks Hwy State	Address:	Pourk Husy	8122 Nat 1	Address:
m: UST/PST PRP Brownfields RRC Superfund		Company Name:	777	emsolum,	Company Name:
Work Order Comments	halei Senninas	Bill to: (if different)	MS	JOSH AGU	Project Manager:

Work Order No:

12/29/2022

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3682-1

SDG Number: 32.210278,-103.72500

List Source: Eurofins Carlsbad

Login Number: 3682 List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3682-1

SDG Number: 32.210278,-103.72500

List Source: Eurofins Midland
List Number: 2
List Creation: 12/21/22 02:49 PM

Creator: Rodriguez, Leticia

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

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<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Adams Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 1/4/2023 12:02:54 PM

JOB DESCRIPTION

Ruby Federal SDG NUMBER 03D2057036

JOB NUMBER

890-3722-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 1/4/2023 12:02:54 PM

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

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

Page 2 of 36

1/4/2023

Client: Ensolum
Project/Site: Ruby Federal
Laboratory Job ID: 890-3722-1
SDG: 03D2057036

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Definitions/Glossary

Job ID: 890-3722-1 Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Qualifiers

GC VOA

Qualifier **Qualifier Description** F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

S1-Surrogate recovery exceeds control limits, low biased. S1+ Surrogate recovery exceeds control limits, high biased. 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 Contains No Free Liquid **CNF**

Duplicate Error Ratio (normalized absolute difference) DER

Dil Fac **Dilution Factor**

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) Limit of Quantitation (DoD/DOE) LOQ

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

Method Quantitation Limit

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

NC Not Calculated

MOI

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

NEG Negative / Absent POS Positive / Present

Practical Quantitation Limit PQL

PRES Presumptive **Quality Control** QC

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3722-1

SDG: 03D2057036

Job ID: 890-3722-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3722-1

Receipt

The samples were received on 12/28/2022 3:40 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 2.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS03 (890-3722-1), FS04 (890-3722-2), FS05 (890-3722-3), FS06 (890-3722-4), FS07 (890-3722-5), FS08 (890-3722-6), FS09 (890-3722-7), FS10 (890-3722-8), SW02 (890-3722-9), SW03 (890-3722-10), SW04 (890-3722-11) and SW05 (890-3722-12).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43081 and analytical batch 880-43042 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-3722-A-4-C MS) and (890-3722-A-4-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: FS09 (890-3722-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: FS10 (890-3722-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: SW03 (890-3722-10). 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.

HPLC/IC

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

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: FS03 Lab Sample ID: 890-3722-1 Matrix: Solid

Date Collected: 12/28/22 08:50 Date Received: 12/28/22 15:40

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 01:49	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 01:49	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 01:49	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/03/23 13:31	01/04/23 01:49	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 01:49	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/03/23 13:31	01/04/23 01:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			01/03/23 13:31	01/04/23 01:49	1
1,4-Difluorobenzene (Surr)	107		70 - 130			01/03/23 13:31	01/04/23 01:49	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/04/23 09:17	1
Method: SW846 8015 NM - Diese Analyte		Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1430		49.9	mg/Kg			01/04/23 11:53	1
		nics (DRO)		mg/Kg			01/04/23 11:53	
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO) Qualifier		mg/Kg Unit	D	Prepared	01/04/23 11:53 Analyzed	
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	sel Range Orga	Qualifier	(GC)		<u>D</u>	Prepared 01/03/23 08:31		1
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	sel Range Orga Result	Qualifier	(GC)	Unit	<u>D</u>	<u>·</u>	Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <49.9	Qualifier U	(GC) RL 49.9	Unit mg/Kg	<u>D</u>	01/03/23 08:31	Analyzed 01/03/23 13:29	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <49.9 1430	Qualifier U	(GC) RL 49.9	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31	Analyzed 01/03/23 13:29 01/03/23 13:29	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	sel Range Orga Result <49.9 1430 <49.9	Qualifier U	(GC) RL 49.9 49.9 49.9	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31	Analyzed 01/03/23 13:29 01/03/23 13:29 01/03/23 13:29	Dil Face
Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	sel Range Orga Result <49.9 1430 <49.9 %Recovery	Qualifier U	(GC) RL 49.9 49.9 49.9 Limits	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 <i>Prepared</i>	Analyzed 01/03/23 13:29 01/03/23 13:29 01/03/23 13:29 Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Sel Range Orga Result <49.9 1430 <49.9	Qualifier U Qualifier	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	Analyzed 01/03/23 13:29 01/03/23 13:29 01/03/23 13:29 Analyzed 01/03/23 13:29	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Sel Range Orga Result	Qualifier U Qualifier	RL 49.9 49.9 49.9 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	Analyzed 01/03/23 13:29 01/03/23 13:29 01/03/23 13:29 Analyzed 01/03/23 13:29	Dil Fac

Client Sample ID: FS04 Lab Sample ID: 890-3722-2

Date Collected: 12/28/22 08:55 Date Received: 12/28/22 15:40

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 02:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 02:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 02:09	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/03/23 13:31	01/04/23 02:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 02:09	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/03/23 13:31	01/04/23 02:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			01/03/23 13:31	01/04/23 02:09	1

Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-3722-2

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: FS04

Date Collected: 12/28/22 08:55 Date Received: 12/28/22 15:40

Sample Depth: 4

Method: SW846 8021B	- Volatile Organic	Compounds	(GC) (Continued)
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Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	107	70 - 130	01/03/23 13:31	01/04/23 02:09	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/04/23 09:17	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2070		49.9	mg/Kg			01/04/23 11:53	1

Method: SW846 8015B NM - Diesel Range Organics	(DRO)	(GC)	١
motified. Offerto College Ithin Biodol Rungo Organico	(5.10)	, , , , ,	,

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/03/23 08:31	01/03/23 13:51	1
Diesel Range Organics (Over C10-C28)	2070		49.9	mg/Kg		01/03/23 08:31	01/03/23 13:51	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/03/23 08:31	01/03/23 13:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101	70 - 130	01/03/23 08:31	01/03/23 13:51	1
o-Terphenyl	92	70 - 130	01/03/23 08:31	01/03/23 13:51	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qu	ualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	244	4.99	mg/Kg			12/31/22 08:04	1

Client Sample ID: FS05 Lab Sample ID: 890-3722-3

Date Collected: 12/28/22 09:00 Date Received: 12/28/22 15:40

Sample Depth: 4

Method: SW846	S 2021R - Volatile	Organic (Compounds	(CC)

modification of the court	no organio comp	Julius (55)	,					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 02:29	1
Toluene	0.0239		0.00199	mg/Kg		01/03/23 13:31	01/04/23 02:29	1
Ethylbenzene	0.0309		0.00199	mg/Kg		01/03/23 13:31	01/04/23 02:29	1
m-Xylene & p-Xylene	0.0302		0.00398	mg/Kg		01/03/23 13:31	01/04/23 02:29	1
o-Xylene	0.0212		0.00199	mg/Kg		01/03/23 13:31	01/04/23 02:29	1
Xylenes, Total	0.0514		0.00398	mg/Kg		01/03/23 13:31	01/04/23 02:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			01/03/23 13:31	01/04/23 02:29	1
1 1 Diffuorabanzana (Surr)	101		70 120			01/02/22 12:21	01/04/22 02:20	1

Surrogate	%Recovery Qua	lalifier Limits	Prepared	Anaiyzea	DII Fac
4-Bromofluorobenzene (Surr)	96	70 - 130	01/03/23 13:31	01/04/23 02:29	1
1,4-Difluorobenzene (Surr)	101	70 - 130	01/03/23 13:31	01/04/23 02:29	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.106		0.00398	mg/Kg			01/04/23 09:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	4530		250	mg/Kg			01/04/23 11:53	1

Eurofins Carlsbad

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-3722-3

Job ID: 890-3722-1 SDG: 03D2057036

Project/Site: Ruby Federal **Client Sample ID: FS05**

Date Collected: 12/28/22 09:00 Date Received: 12/28/22 15:40

Client: Ensolum

el Range Orga	nics (DRO) (0	GC)					
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<250	U	250	mg/Kg		01/03/23 08:31	01/03/23 14:36	5
	Result	Result Qualifier		Result Qualifier RL Unit	Result Qualifier RL Unit D	Result Qualifier RL Unit D Prepared	Result Qualifier RL Unit D Prepared Analyzed

(GRO)-C6-C10 **Diesel Range Organics (Over** 250 mg/Kg 01/03/23 08:31 01/03/23 14:36 4530 C10-C28) Oll Range Organics (Over C28-C36) <250 U 250 mg/Kg 01/03/23 08:31 01/03/23 14:36

%Recovery Qualifier Limits Prepared Analyzed Dil Fac Surrogate 70 - 130 01/03/23 08:31 01/03/23 14:36 1-Chlorooctane 107 o-Terphenyl 122 70 - 130 01/03/23 08:31 01/03/23 14:36 5

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Dil Fac Prepared Analyzed Chloride 4320 25.0 mg/Kg 12/31/22 08:09

Client Sample ID: FS06 Lab Sample ID: 890-3722-4 Date Collected: 12/28/22 09:05 **Matrix: Solid**

Date Received: 12/28/22 15:40

Sample Depth: 4

Method: SW846 8021B - Vol	atile Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/03/23 13:31	01/04/23 02:50	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/03/23 13:31	01/04/23 02:50	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/03/23 13:31	01/04/23 02:50	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/03/23 13:31	01/04/23 02:50	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/03/23 13:31	01/04/23 02:50	1
Xylenes, Total	< 0.00403	U	0.00403	mg/Kg		01/03/23 13:31	01/04/23 02:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	01/03/23 13:31	01/04/23 02:50	1
1,4-Difluorobenzene (Surr)	113		70 - 130	01/03/23 13:31	01/04/23 02:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier Unit Prepared Analyzed Dil Fac Total BTEX <0.00403 U 0.00403 01/04/23 09:17 mg/Kg

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Total TPH <49.8 U 49.8 mg/Kg 01/04/23 11:53

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U	49.8	mg/Kg		01/03/23 08:31	01/03/23 12:22	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.8	U	49.8	mg/Kg		01/03/23 08:31	01/03/23 12:22	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/03/23 08:31	01/03/23 12:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	01/03/23 08:31	01/03/23 12:22	1
o-Terphenyl	91		70 - 130	01/03/23 08:31	01/03/23 12:22	1

Project/Site: Ruby Federal

Client: Ensolum Job ID: 890-3722-1 SDG: 03D2057036

Lab Sample ID: 890-3722-4

Client Sample ID: FS06

Date Collected: 12/28/22 09:05 Date Received: 12/28/22 15:40

Matrix: Solid

Sample Depth: 4

Analyte

Total BTEX

Method: MCAWW 300.0 - Anions, lo	on Chromato	graphy - Sol	uble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.4		4.98	mg/Kg			12/31/22 08:13	1

Client Sample ID: FS07 Lab Sample ID: 890-3722-5

Date Collected: 12/28/22 09:10

Method: TAL SOP Total BTEX - Total BTEX Calculation

Result Qualifier

0.0388

Matrix: Solid

Date Received: 12/28/22 15:40 Sample Depth: 4

Dil Fac

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:21	1
Toluene	0.00236		0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:21	1
Ethylbenzene	0.0135		0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:21	1
m-Xylene & p-Xylene	0.00471		0.00398	mg/Kg		01/03/23 13:31	01/04/23 05:21	1
o-Xylene	0.0182		0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:21	1
Xylenes, Total	0.0229		0.00398	mg/Kg		01/03/23 13:31	01/04/23 05:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			01/03/23 13:31	01/04/23 05:21	1
1,4-Difluorobenzene (Surr)	103		70 - 130			01/03/23 13:31	01/04/23 05:21	1

Method: SW846 8015 NM - Diesel F	Range Organics (DRO) (3 C)					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	89.1	49.9	mg/Kg			01/04/23 11:53	1
Method: SW846 8015B NM - Diesel	Range Organics (DRO)	(GC)					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	40.0	40.0			0.1.10.0.10.0.0.0.0.1	0.1/0.0/0.0 1.1.50	

0.00398

Unit

mg/Kg

Prepared

Analyzed

01/04/23 09:17

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	DII Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/03/23 08:31	01/03/23 14:58	1
Diesel Range Organics (Over C10-C28)	89.1		49.9	mg/Kg		01/03/23 08:31	01/03/23 14:58	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/03/23 08:31	01/03/23 14:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130			01/03/23 08:31	01/03/23 14:58	1
o-Terphenyl	95		70 - 130			01/03/23 08:31	01/03/23 14:58	1

Method: MCAWW 300.0 - Anions, I	on Chromato	graphy - So	oluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.4		4.95	mg/Kg			12/31/22 08:18	1

Matrix: Solid

Lab Sample ID: 890-3722-6

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: FS08

Date Collected: 12/28/22 09:15 Date Received: 12/28/22 15:40

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:41	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:41	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/03/23 13:31	01/04/23 05:41	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 05:41	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/03/23 13:31	01/04/23 05:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			01/03/23 13:31	01/04/23 05:41	1
1,4-Difluorobenzene (Surr)	103		70 - 130			01/03/23 13:31	01/04/23 05:41	1
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/04/23 09:17	1
Analyte	Racult	Qualifier						
		Quanner	RL	Unit	D	Prepared	Analyzed	
Total TPH	97.6	Quainiei	50.0	mg/Kg	D	Prepared	Analyzed 01/04/23 11:53	Dil Fac
Total TPH	97.6	<u> </u>	50.0		D	Prepared		
Total TPH Method: SW846 8015B NM - Die	97.6 sel Range Orga	<u> </u>	50.0		<u>D</u>	Prepared		1
	97.6 sel Range Orga	nics (DRO) Qualifier	50.0 (GC)	mg/Kg	<u> </u>		01/04/23 11:53	1 Dil Fac
Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97.6 sel Range Orga Result	nics (DRO) Qualifier	50.0 (GC)	mg/Kg	<u> </u>	Prepared	01/04/23 11:53 Analyzed	Dil Fac
Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10	97.6 sel Range Orga Result <50.0	nics (DRO) Qualifier U	(GC) RL 50.0	mg/Kg Unit mg/Kg	<u> </u>	Prepared 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 15:19	Dil Fac
Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	97.6 sel Range Orga Result <50.0 97.6	nics (DRO) Qualifier U	50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg	<u> </u>	Prepared 01/03/23 08:31 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 15:19 01/03/23 15:19	1 Dil Fac
Method: SW846 8015B NM - Die: Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	97.6 sel Range Orga Result <50.0 97.6 <50.0	nics (DRO) Qualifier U	50.0 (GC) RL 50.0 50.0 50.0	mg/Kg Unit mg/Kg	<u> </u>	Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31	O1/04/23 11:53 Analyzed O1/03/23 15:19 O1/03/23 15:19 O1/03/23 15:19	Dil Fac
Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	97.6 sel Range Orga Result <50.0 97.6 <50.0 %Recovery	nics (DRO) Qualifier U	50.0 (GC) RL 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg	<u> </u>	Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared	O1/04/23 11:53 Analyzed O1/03/23 15:19 O1/03/23 15:19 O1/03/23 15:19 Analyzed	Dil Fac
Total TPH Method: SW846 8015B NM - Diesel Range Organics (ORO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	97.6 sel Range Orga Result <50.0 97.6 <50.0 %Recovery 110 89	U Qualifier	50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg	<u> </u>	Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 15:19 01/03/23 15:19 Analyzed 01/03/23 15:19	Dil Fac
Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	97.6 sel Range Orga Result <50.0 97.6 <50.0 %Recovery 110 89 s, Ion Chromator	U Qualifier	50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg	<u> </u>	Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 15:19 01/03/23 15:19 Analyzed 01/03/23 15:19	Dil Fac

Client Sample ID: FS09

Date Collected: 12/28/22 10:00

Date Received: 12/28/22 15:40

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0998	U	0.0998	mg/Kg		01/03/23 13:31	01/04/23 03:10	50
Toluene	1.80		0.0998	mg/Kg		01/03/23 13:31	01/04/23 03:10	50
Ethylbenzene	11.1		0.0998	mg/Kg		01/03/23 13:31	01/04/23 03:10	50
m-Xylene & p-Xylene	10.5		0.200	mg/Kg		01/03/23 13:31	01/04/23 03:10	50
o-Xylene	6.11		0.0998	mg/Kg		01/03/23 13:31	01/04/23 03:10	50
Xylenes, Total	16.6		0.200	mg/Kg		01/03/23 13:31	01/04/23 03:10	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/03/23 13:31	01/04/23 03:10	50

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Lab Sample ID: 890-3722-7

Matrix: Solid

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: FS09 Lab Sample ID: 890-3722-7

Date Collected: 12/28/22 10:00 Matrix: Solid Date Received: 12/28/22 15:40

Sample Depth: 4

Method: SW846 8021B	- Volatile Organic Compound	s (GC) (Continued)
motiloa. Otto-to coz ib	Tolutile Organie Compound	5 (5 5) (5 5) (11) (11)

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	87	70 - 130	01/03/23 13:31	01/04/23 03:10	50

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

Total BTEX	29.5	0.200	mg/Kg	01/04/23 09:17	1
Method: SW846 8015 NM - Diesel F	Range Organics (DRO)	(GC)			

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	8770	250	mg/Kg			01/04/23 11:53	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	937	250	mg/Kg		01/03/23 08:31	01/03/23 14:14	5
Diesel Range Organics (Over C10-C28)	7830	250	mg/Kg		01/03/23 08:31	01/03/23 14:14	5
Oll Range Organics (Over C28-C36)	<250 U	250	mg/Kg		01/03/23 08:31	01/03/23 14:14	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	01/03/23 08:31	01/03/23 14:14	5
o-Terphenyl	213	S1+	70 - 130	01/03/23 08:31	01/03/23 14:14	5

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble							
Analyte	Result Qu	ualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4980	50.1	mg/Kg			12/31/22 08:37	10

Client Sample ID: FS10 Lab Sample ID: 890-3722-8 **Matrix: Solid**

Date Collected: 12/28/22 10:05 Date Received: 12/28/22 15:40

Sample Depth: 4

 Mathad.	CIMO 4C	0024D	Valatila Ossania	Compounds (GC)
viernoa:	SVVA4n	AUZID .	· voiatile Organic	: Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0996	U	0.0996	mg/Kg		01/03/23 13:31	01/04/23 03:31	50
Toluene	0.184		0.0996	mg/Kg		01/03/23 13:31	01/04/23 03:31	50
Ethylbenzene	0.664		0.0996	mg/Kg		01/03/23 13:31	01/04/23 03:31	50
m-Xylene & p-Xylene	<0.199	U	0.199	mg/Kg		01/03/23 13:31	01/04/23 03:31	50
o-Xylene	0.417		0.0996	mg/Kg		01/03/23 13:31	01/04/23 03:31	50
Xylenes, Total	0.417		0.199	mg/Kg		01/03/23 13:31	01/04/23 03:31	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			01/03/23 13:31	01/04/23 03:31	50

Surrogate	%Recovery	Qualifier	Limits	Pre	pared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	01/03/2	23 13:31	01/04/23 03:31	50
1,4-Difluorobenzene (Surr)	99		70 - 130	01/03/	23 13:31	01/04/23 03:31	50

Method: TAL SOP Total BTEX - Total BTEX Calculation								
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	1.27	0.199	mg/Kg			01/04/23 09:17	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)							
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	94.6	50.0	mg/Kg			01/04/23 11:53	1

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Dil Fac

Matrix: Solid

Lab Sample ID: 890-3722-8

12/31/22 08:42

Client: Ensolum Job ID: 890-3722-1
Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: FS10

Date Collected: 12/28/22 10:05 Date Received: 12/28/22 15:40

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/03/23 08:31	01/03/23 15:41	1
Diesel Range Organics (Over C10-C28)	94.6		50.0	mg/Kg		01/03/23 08:31	01/03/23 15:41	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/23 08:31	01/03/23 15:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	134	S1+	70 - 130			01/03/23 08:31	01/03/23 15:41	1
o-Terphenyl	117		70 - 130			01/03/23 08:31	01/03/23 15:41	1
Method: MCAWW 300.0 - Anions	, Ion Chromato	ography - So	oluble					
Analyte	Dogult	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: SW02

Date Collected: 12/28/22 10:10

Lab Sample ID: 890-3722-9

Matrix: Solid

13.2

4.95

mg/Kg

Date Received: 12/28/22 15:40

Occupate Devide 0 4

Sample Depth: 0 - 4

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 06:02	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 06:02	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 06:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/03/23 13:31	01/04/23 06:02	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/03/23 13:31	01/04/23 06:02	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/03/23 13:31	01/04/23 06:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			01/03/23 13:31	01/04/23 06:02	1
1,4-Difluorobenzene (Surr)	108		70 - 130			01/03/23 13:31	01/04/23 06:02	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	<0.00402							
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/04/23 09:17	1
• •				mg/Kg			01/04/23 09:17	1
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					·
Method: SW846 8015 NM - Diese Analyte	el Range Organ Result	ics (DRO) (GC)	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
: Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)		<u>D</u>	Prepared		·
Method: SW846 8015 NM - Diese Analyte	Result <50.0	ics (DRO) (Qualifier	RL 50.0	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ Result <50.0 sel Range Organ	ics (DRO) (Qualifier	RL 50.0	Unit	<u>D</u>	Prepared Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	el Range Organ Result <50.0 sel Range Organ	ics (DRO) (Outline DRO) Qualifier Qualifier Qualifier	RL 50.0	<mark>Unit</mark> mg/Kg		<u> </u>	Analyzed 01/04/23 11:53	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	el Range Organ Result <50.0 sel Range Orga Result	ics (DRO) (Outline DRO) Qualifier Qualifier Qualifier	GC) RL 50.0 (GC) RL	Unit mg/Kg		Prepared	Analyzed 01/04/23 11:53	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	el Range Organ Result <50.0 sel Range Orga Result	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	GC) RL 50.0 (GC) RL	Unit mg/Kg		Prepared	Analyzed 01/04/23 11:53	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	el Range Organ Result <50.0 sel Range Orga Result <50.0	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	(GC) RL 50.0 RL 50.0	Unit mg/Kg Unit mg/Kg		Prepared 01/03/23 08:31	Analyzed 01/04/23 11:53 Analyzed 01/03/23 16:03	Dil Fac Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10	el Range Organ Result <50.0 sel Range Orga Result <50.0	ics (DRO) ((Qualifier U nics (DRO) Qualifier U	(GC) RL 50.0 RL 50.0	Unit mg/Kg Unit mg/Kg		Prepared 01/03/23 08:31	Analyzed 01/04/23 11:53 Analyzed 01/03/23 16:03	Dil Fac Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <50.0 sel Range Orga Result <50.0 <50.0	ics (DRO) ((Qualifier U nics (DRO) Qualifier U U	GC) RL 50.0 (GC) RL 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 01/03/23 08:31 01/03/23 08:31	Analyzed 01/04/23 11:53 Analyzed 01/03/23 16:03 01/03/23 16:03	Dil Fac Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	el Range Organ Result <50.0 sel Range Orga Result <50.0 <50.0 <50.0	ics (DRO) ((Qualifier U nics (DRO) Qualifier U U	GC) RL 50.0 (GC) RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31	Analyzed 01/04/23 11:53 Analyzed 01/03/23 16:03 01/03/23 16:03 01/03/23 16:03	Dil Fac Dil Fac 1 1 1

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: SW02 Lab Sample ID: 890-3722-9 Matrix: Solid

Date Collected: 12/28/22 10:10 Date Received: 12/28/22 15:40

Sample Depth: 0 - 4

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	<5.05	U	5.05	mg/Kg			12/31/22 08:46	1

Client Sample ID: SW03 Lab Sample ID: 890-3722-10 Matrix: Solid

Date Collected: 12/28/22 10:15 Date Received: 12/28/22 15:40

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:22	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:22	,
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/03/23 13:31	01/04/23 06:22	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:22	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/03/23 13:31	01/04/23 06:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			01/03/23 13:31	01/04/23 06:22	1
1,4-Difluorobenzene (Surr)	108		70 - 130			01/03/23 13:31	01/04/23 06:22	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/04/23 09:17	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) ((GC)					
		ics (DRO) ((Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH		Qualifier	•	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/04/23 11:53	Dil Fac
Analyte Total TPH		Qualifier U	RL 50.0		<u>D</u>	Prepared		
Analyte	Result <50.0	Qualifier U	RL 50.0		<u>D</u>	Prepared Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <50.0	Qualifier Unics (DRO) Qualifier	RL 50.0	mg/Kg			01/04/23 11:53	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0 sel Range Orga	Qualifier U nics (DRO) Qualifier U	RL 50.0 (GC)	mg/Kg		Prepared	01/04/23 11:53 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 sel Range Orga Result <50.0	Qualifier U nics (DRO) Qualifier U	RL	mg/Kg Unit mg/Kg		Prepared 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 16:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies	Result	Qualifier U nics (DRO) Qualifier U	RL 50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/03/23 08:31 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 16:25 01/03/23 16:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result	Qualifier U nics (DRO) Qualifier U U	RL 50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 16:25 01/03/23 16:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result	Qualifier U nics (DRO) Qualifier U U Qualifier	RL 50.0 (GC) RL 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared	O1/04/23 11:53 Analyzed O1/03/23 16:25 O1/03/23 16:25 O1/03/23 16:25 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U nics (DRO) Qualifier U U Qualifier S1+	RL 50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 16:25 01/03/23 16:25 Analyzed 01/03/23 16:25	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U nics (DRO) Qualifier U U Qualifier S1+	RL 50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	01/04/23 11:53 Analyzed 01/03/23 16:25 01/03/23 16:25 Analyzed 01/03/23 16:25	Dil Fac

Client: Ensolum Job ID: 890-3722-1
Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: SW04 Lab Sample ID: 890-3722-11

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/03/23 13:31	01/04/23 06:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/03/23 13:31	01/04/23 06:43	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/03/23 13:31	01/04/23 06:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			01/03/23 13:31	01/04/23 06:43	1
1,4-Difluorobenzene (Surr)	107		70 - 130			01/03/23 13:31	01/04/23 06:43	1
Method: TAL SOP Total BTEX -	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			01/04/23 09:17	1
Mathadi CM04C 004E NM Diag	al Dames Orman	: (DDO) (00)					
Method: SW846 8015 NM - Dieso Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			50.0	<u> </u>		Frepareu		Dil Fac
·	\30.0	U	30.0					1
_				mg/ng			01/04/23 11:53	1
- Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)		mg/Kg			01/04/23 11:53	1
Method: SW846 8015B NM - Die Analyte	• •	nics (DRO) Qualifier		Unit	D	Prepared	01/04/23 11:53 Analyzed	1 Dil Fac
Analyte Gasoline Range Organics	• •	Qualifier	(GC)		<u>D</u>	Prepared 01/03/23 08:31		
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U	(GC)	Unit	<u>D</u>	<u>·</u>	Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.0	Qualifier U	(GC) RL 50.0	Unit mg/Kg	<u>D</u>	01/03/23 08:31	Analyzed 01/03/23 17:09	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0	Qualifier U U U	(GC) RL 50.0	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31	Analyzed 01/03/23 17:09 01/03/23 17:09	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 <50.0 <50.0	Qualifier U U U	(GC) RL 50.0 50.0 50.0	Unit mg/Kg mg/Kg	<u> </u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31	Analyzed 01/03/23 17:09 01/03/23 17:09 01/03/23 17:09	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate	Result	Qualifier U U U	(GC) RL 50.0 50.0 50.0 Limits	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared	Analyzed 01/03/23 17:09 01/03/23 17:09 01/03/23 17:09 Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result	Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	Analyzed 01/03/23 17:09 01/03/23 17:09 01/03/23 17:09 Analyzed 01/03/23 17:09	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	01/03/23 08:31 01/03/23 08:31 01/03/23 08:31 Prepared 01/03/23 08:31	Analyzed 01/03/23 17:09 01/03/23 17:09 01/03/23 17:09 Analyzed 01/03/23 17:09	Dil Fac

Client Sample ID: SW05 Lab Sample ID: 890-3722-12

Date Collected: 12/28/22 10:25 Date Received: 12/28/22 15:40

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 07:03	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 07:03	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 07:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/03/23 13:31	01/04/23 07:03	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/03/23 13:31	01/04/23 07:03	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/03/23 13:31	01/04/23 07:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			01/03/23 13:31	01/04/23 07:03	1

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Matrix: Solid

1-Chlorooctane

o-Terphenyl

Matrix: Solid

01/03/23 08:31

01/03/23 08:31

01/03/23 17:31

01/03/23 17:31

Client Sample Results

Client: Ensolum Job ID: 890-3722-1 Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: SW05 Lab Sample ID: 890-3722-12

Date Collected: 12/28/22 10:25 Date Received: 12/28/22 15:40

130

100

Sample Depth: 0 - 4

	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	109		70 - 130			01/03/23 13:31	01/04/23 07:03	1
Method: TAL SOP Total BTEX - T	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/04/23 09:17	1
Total TPH Method: SW846 8015B NM - Dies	<49.9		49.9	mg/Kg			01/04/23 11:53	1
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		01/03/23 08:31	01/03/23 17:31	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/03/23 08:31	01/03/23 17:31	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	11	49.9	mg/Kg		01/03/23 08:31	01/03/23 17:31	1

Method: MCAWW 300.0 - Anions, I	on Chromato	graphy - So	oluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	593		5.05	ma/Ka			12/31/22 09:10	1	

70 - 130

70 - 130

Surrogate Summary

Job ID: 890-3722-1 Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
380-23218-A-1-A MS	Matrix Spike	108	105	
880-23218-A-1-B MSD	Matrix Spike Duplicate	104	105	
390-3722-1	FS03	99	107	
390-3722-2	FS04	95	107	
390-3722-3	FS05	96	101	
390-3722-4	FS06	111	113	
390-3722-5	FS07	93	103	
390-3722-6	FS08	103	103	
390-3722-7	FS09	116	87	
390-3722-8	FS10	100	99	
390-3722-9	SW02	102	108	
390-3722-10	SW03	108	108	
390-3722-11	SW04	104	107	
390-3722-12	SW05	106	109	
LCS 880-43081/1-A	Lab Control Sample	98	108	
LCSD 880-43081/2-A	Lab Control Sample Dup	97	106	
	Method Blank	97	107	
MB 880-42941/5-A		99	106	

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acce
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-3722-1	FS03	121	105	
390-3722-2	FS04	101	92	
390-3722-3	FS05	107	122	
390-3722-4	FS06	110	91	
390-3722-4 MS	FS06	97	66 S1-	
390-3722-4 MSD	FS06	98	65 S1-	
390-3722-5	FS07	119	95	
390-3722-6	FS08	110	89	
390-3722-7	FS09	108	213 S1+	
390-3722-8	FS10	134 S1+	117	
390-3722-9	SW02	115	93	
390-3722-10	SW03	136 S1+	112	
390-3722-11	SW04	107	87	
390-3722-12	SW05	130	100	
_CS 880-43037/2-A	Lab Control Sample	127	94	
_CSD 880-43037/3-A	Lab Control Sample Dup	112	83	
MB 880-43037/1-A	Method Blank	103	93	
Surrogate Legend	Method Blank	103	93	

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3722-1 SDG: 03D2057036 Project/Site: Ruby Federal

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42941/5-A

Analysis Batch: 43042

Matrix: Solid

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

1

Prep Batch: 42941

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	•
Toluene	<0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/30/22 11:33	01/03/23 12:23	
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/30/22 11:33	01/03/23 12:23	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/30/22 11:33	01/03/23 12:23	

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	12/30/22 11:33	01/03/23 12:23	1
1,4-Difluorobenzene (Surr)	107		70 - 130	12/30/22 11:33	01/03/23 12:23	1

Lab Sample ID: MB 880-43081/5-A

Client Sample ID: Method Blank

Matrix: Solid Prep Type: Total/NA Analysis Batch: 43042 Prep Batch: 43081 мв мв

Analyte	Result C	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	J	0.00200	mg/Kg		01/03/23 13:31	01/03/23 23:58	1
Toluene	<0.00200 L	J	0.00200	mg/Kg		01/03/23 13:31	01/03/23 23:58	1
Ethylbenzene	<0.00200 L	J	0.00200	mg/Kg		01/03/23 13:31	01/03/23 23:58	1
m-Xylene & p-Xylene	<0.00400 L	J	0.00400	mg/Kg		01/03/23 13:31	01/03/23 23:58	1
o-Xylene	<0.00200 L	J	0.00200	mg/Kg		01/03/23 13:31	01/03/23 23:58	1
Xylenes, Total	<0.00400 L	J	0.00400	mg/Kg		01/03/23 13:31	01/03/23 23:58	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	01/03/23 13:31	01/03/23 23:58	1
1,4-Difluorobenzene (Surr)	106		70 - 130	01/03/23 13:31	01/03/23 23:58	1

Lab Sample ID: LCS 880-43081/1-A

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43081

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08719		mg/Kg		87	70 - 130	
Toluene	0.100	0.08354		mg/Kg		84	70 - 130	
Ethylbenzene	0.100	0.08171		mg/Kg		82	70 - 130	
m-Xylene & p-Xylene	0.200	0.1684		mg/Kg		84	70 - 130	
o-Xylene	0.100	0.08268		mg/Kg		83	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	98	70 - 130
1.4-Difluorobenzene (Surr)	108	70 - 130

Lab Sample ID: LCSD 880-43081/2-A

Matrix: Solid

Analyte

Benzene

Analysis Batch: 43042

Client Sample ID: Lab	Control Sample Dup
	Date of Taxable Taxable I/NIA

%Rec

91

Prep Type: Total/NA

Prep Batch: 43081

%Rec		RPD	
Limits	RPD	Limit	
70 - 130	4	35	

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LCSD LCSD Result Qualifier

0.09080

Unit

mg/Kg

Spike

Added

0.100

QC Sample Results

Client: Ensolum Job ID: 890-3722-1
Project/Site: Ruby Federal SDG: 03D2057036

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

Lab Sample ID: LCSD 880-43081/2-A

Matrix: Solid Analysis Batch: 43042 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 43081

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit D Toluene 0.100 0.08713 87 70 - 130 35 mg/Kg 4 Ethylbenzene 0.100 0.08626 mg/Kg 86 70 - 130 35 0.200 m-Xylene & p-Xylene 0.1780 mg/Kg 89 70 130 35 6 o-Xylene 0.100 0.08662 mg/Kg 87 70 - 130 5 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 880-23218-A-1-A MS

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 43081

MS MS %Rec Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Benzene U F1 0.101 <0.00202 U F1 <0.00199 mg/Kg 0.4 70 - 130 Toluene <0.00199 U F2 F1 0.101 <0.00202 UF1 0.3 70 - 130 mg/Kg Ethylbenzene 0.101 70 - 130 0.00570 0.01008 mg/Kg 0.0163 F1 6 m-Xylene & p-Xylene 0.202 0.02834 F1 70 - 130 mg/Kg o-Xylene 0.0114 F1 0.101 0.01973 F1 mg/Kg 8 70 - 130

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	108	70 - 130
1,4-Difluorobenzene (Surr)	105	70 - 130

Lab Sample ID: 880-23218-A-1-B MSD

Matrix: Solid

Analysis Batch: 43042

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 43081

%Rec Spike MSD MSD RPD Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Benzene <0.00199 U F1 0.0996 <0.00199 U F1 mg/Kg 0 70 - 130 NC 35 Toluene <0.00199 U F2 F1 0.0996 0.006192 F2 F1 mg/Kg 5 70 - 130 105 35 Ethylbenzene 0.00570 F1 0.0996 0.01127 F1 mg/Kg 6 70 - 130 11 35 0.199 0.02364 F1 4 70 - 130 35 m-Xylene & p-Xylene 0.0163 F1 mg/Kg 18 0.0996 0.01768 F1 o-Xylene 0.0114 F1 mg/Kg 70 - 130 35

MSD MSD

Surroyale	76Recovery	Qualifier	LIIIIII
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

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

Lab Sample ID: MB 880-43037/1-A

Matrix: Solid

Analysis Batch: 43029

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

Prep Batch: 43037

 MB
 MB

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Gasoline Range Organics
 <50.0</td>
 U
 50.0
 mg/Kg
 01/03/23 08:31
 01/03/23 08:45
 1

(GRO)-C6-C10

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Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

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

Lab Sample ID: MB 880-43037/1-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 43029	Prep Batch: 43037
MD MD	

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/03/23 08:31	01/03/23 08:45	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/23 08:31	01/03/23 08:45	1
	00.0		00.0	9/9		0.1700720 00.01	0.700,20.00.10	·
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130			01/03/23 08:31	01/03/23 08:45	1
o-Terphenyl	93		70 - 130			01/03/23 08:31	01/03/23 08:45	1

- -										
Lab Sample ID: LCS 880-43	037/2-A						Client	Sample	ID: Lab Contr	ol Sample
Matrix: Solid									Prep Type	: Total/NA
Analysis Batch: 43029									Prep Bat	ch: 43037
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics			1000	981.6		mg/Kg		98	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over			1000	1010		mg/Kg		101	70 - 130	
C10-C28)										
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	127		70 - 130							
o-Terphenvl	94		70 - 130							

Client San	iple ID: I	Lab Contro	ıl Sampl	e Dup
		Prep 1	ype: To	tal/NA
		Prep	Batch:	43037
		%Rec		RPD
Unit D	%Rec	Limits	RPD	Limit
mg/Kg	95	70 - 130	3	20
mg/Kg	91	70 - 130	11	20
_	<mark>Unit D</mark> mg/Kg	Unit D %Rec 95	Prep T Prep	Unit D %Rec Limits RPD mg/Kg 95 70 - 130 3

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 890-3722-4 MS Matrix: Solid Analysis Batch: 43029	Sample	Sample	Spike	MS	MS				Prep Ty	ple ID: FS06 pe: Total/NA Batch: 43037
	•	•	Spike	IVIS	IVIS				70Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	962.1		mg/Kg		96	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.8	U	999	978.6		mg/Kg		95	70 - 130	
	MS	MS								

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	66	S1-	70 - 130

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

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

Lab Sample ID: 890-3722-4 MSD Client Sample ID: FS06 **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 43029 Prep Batch: 43037

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8	U	999	1015		mg/Kg		102	70 - 130	5	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.8	U	999	970.2		mg/Kg		94	70 - 130	1	20
C10-C28)											

MSD MSD %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 98 o-Terphenyl 65 S1-70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42980/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 43004

мв мв

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 12/31/22 07:36

Lab Sample ID: LCS 880-42980/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 43004

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	268.2		mg/Kg		107	90 - 110	

Lab Sample ID: LCSD 880-42980/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 43004

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	261.8		mg/Kg		105	90 - 110	2	20	

Lab Sample ID: 890-3722-1 MS **Client Sample ID: FS03 Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 43004

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	116		251	384.6		ma/Ka		107	90 110	

Lab Sample ID: 890-3722-1 MSD **Client Sample ID: FS03** Matrix: Solid **Prep Type: Soluble**

Analysis Batch: 43004

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Analyte %Rec Limits RPD Limit Unit 251 372.6 103 Chloride 116 90 - 110 mg/Kg

QC Sample Results

Client: Ensolum Job ID: 890-3722-1 Project/Site: Ruby Federal

SDG: 03D2057036

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3722-11 MS Client Sample ID: SW04 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 43004

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	197		251	471.1		mg/Kg		109	90 - 110	

Lab Sample ID: 890-3722-11 MSD Client Sample ID: SW04 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 43004

Sample Sample Spike MSD MSD %Rec RPD Limit Analyte Result Qualifier Added Result Qualifier Limits RPD Unit %Rec Chloride 197 251 461.4 mg/Kg 106 90 - 110 2

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3722-1 SDG: 03D2057036

GC VOA

Prep Batch: 42941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42941/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 43042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3722-1	FS03	Total/NA	Solid	8021B	43081
890-3722-2	FS04	Total/NA	Solid	8021B	43081
890-3722-3	FS05	Total/NA	Solid	8021B	43081
890-3722-4	FS06	Total/NA	Solid	8021B	43081
890-3722-5	FS07	Total/NA	Solid	8021B	43081
890-3722-6	FS08	Total/NA	Solid	8021B	43081
890-3722-7	FS09	Total/NA	Solid	8021B	43081
890-3722-8	FS10	Total/NA	Solid	8021B	43081
890-3722-9	SW02	Total/NA	Solid	8021B	43081
890-3722-10	SW03	Total/NA	Solid	8021B	43081
890-3722-11	SW04	Total/NA	Solid	8021B	43081
890-3722-12	SW05	Total/NA	Solid	8021B	43081
MB 880-42941/5-A	Method Blank	Total/NA	Solid	8021B	42941
MB 880-43081/5-A	Method Blank	Total/NA	Solid	8021B	43081
LCS 880-43081/1-A	Lab Control Sample	Total/NA	Solid	8021B	43081
LCSD 880-43081/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43081
880-23218-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	43081
880-23218-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43081

Prep Batch: 43081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-3722-1	FS03	Total/NA	Solid	5035	
890-3722-2	FS04	Total/NA	Solid	5035	
890-3722-3	FS05	Total/NA	Solid	5035	
890-3722-4	FS06	Total/NA	Solid	5035	
890-3722-5	FS07	Total/NA	Solid	5035	
890-3722-6	FS08	Total/NA	Solid	5035	
890-3722-7	FS09	Total/NA	Solid	5035	
890-3722-8	FS10	Total/NA	Solid	5035	
890-3722-9	SW02	Total/NA	Solid	5035	
890-3722-10	SW03	Total/NA	Solid	5035	
890-3722-11	SW04	Total/NA	Solid	5035	
890-3722-12	SW05	Total/NA	Solid	5035	
MB 880-43081/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43081/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43081/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23218-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23218-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3722-1	FS03	Total/NA	Solid	Total BTEX	
890-3722-2	FS04	Total/NA	Solid	Total BTEX	
890-3722-3	FS05	Total/NA	Solid	Total BTEX	
890-3722-4	FS06	Total/NA	Solid	Total BTEX	
890-3722-5	FS07	Total/NA	Solid	Total BTEX	
890-3722-6	FS08	Total/NA	Solid	Total BTEX	

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Client: Ensolum Job ID: 890-3722-1 Project/Site: Ruby Federal SDG: 03D2057036

GC VOA (Continued)

Analysis Batch: 43128 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3722-7	FS09	Total/NA	Solid	Total BTEX	
890-3722-8	FS10	Total/NA	Solid	Total BTEX	
890-3722-9	SW02	Total/NA	Solid	Total BTEX	
890-3722-10	SW03	Total/NA	Solid	Total BTEX	
890-3722-11	SW04	Total/NA	Solid	Total BTEX	
890-3722-12	SW05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 43029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3722-1	FS03	Total/NA	Solid	8015B NM	43037
890-3722-2	FS04	Total/NA	Solid	8015B NM	43037
890-3722-3	FS05	Total/NA	Solid	8015B NM	43037
890-3722-4	FS06	Total/NA	Solid	8015B NM	43037
890-3722-5	FS07	Total/NA	Solid	8015B NM	43037
890-3722-6	FS08	Total/NA	Solid	8015B NM	43037
890-3722-7	FS09	Total/NA	Solid	8015B NM	43037
890-3722-8	FS10	Total/NA	Solid	8015B NM	43037
890-3722-9	SW02	Total/NA	Solid	8015B NM	43037
890-3722-10	SW03	Total/NA	Solid	8015B NM	43037
890-3722-11	SW04	Total/NA	Solid	8015B NM	43037
890-3722-12	SW05	Total/NA	Solid	8015B NM	43037
MB 880-43037/1-A	Method Blank	Total/NA	Solid	8015B NM	43037
LCS 880-43037/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43037
LCSD 880-43037/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43037
890-3722-4 MS	FS06	Total/NA	Solid	8015B NM	43037
890-3722-4 MSD	FS06	Total/NA	Solid	8015B NM	43037

Prep Batch: 43037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-3722-1	FS03	Total/NA	Solid	8015NM Prep	
890-3722-2	FS04	Total/NA	Solid	8015NM Prep	
890-3722-3	FS05	Total/NA	Solid	8015NM Prep	
890-3722-4	FS06	Total/NA	Solid	8015NM Prep	
890-3722-5	FS07	Total/NA	Solid	8015NM Prep	
890-3722-6	FS08	Total/NA	Solid	8015NM Prep	
890-3722-7	FS09	Total/NA	Solid	8015NM Prep	
890-3722-8	FS10	Total/NA	Solid	8015NM Prep	
890-3722-9	SW02	Total/NA	Solid	8015NM Prep	
890-3722-10	SW03	Total/NA	Solid	8015NM Prep	
890-3722-11	SW04	Total/NA	Solid	8015NM Prep	
890-3722-12	SW05	Total/NA	Solid	8015NM Prep	
MB 880-43037/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43037/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43037/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3722-4 MS	FS06	Total/NA	Solid	8015NM Prep	
890-3722-4 MSD	FS06	Total/NA	Solid	8015NM Prep	

Client: Ensolum Job ID: 890-3722-1 Project/Site: Ruby Federal SDG: 03D2057036

GC Semi VOA

Analysis Batch: 43155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3722-1	FS03	Total/NA	Solid	8015 NM	
890-3722-2	FS04	Total/NA	Solid	8015 NM	
890-3722-3	FS05	Total/NA	Solid	8015 NM	
890-3722-4	FS06	Total/NA	Solid	8015 NM	
890-3722-5	FS07	Total/NA	Solid	8015 NM	
890-3722-6	FS08	Total/NA	Solid	8015 NM	
890-3722-7	FS09	Total/NA	Solid	8015 NM	
890-3722-8	FS10	Total/NA	Solid	8015 NM	
890-3722-9	SW02	Total/NA	Solid	8015 NM	
890-3722-10	SW03	Total/NA	Solid	8015 NM	
890-3722-11	SW04	Total/NA	Solid	8015 NM	
890-3722-12	SW05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 42980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3722-1	FS03	Soluble	Solid	DI Leach	
890-3722-2	FS04	Soluble	Solid	DI Leach	
890-3722-3	FS05	Soluble	Solid	DI Leach	
890-3722-4	FS06	Soluble	Solid	DI Leach	
890-3722-5	FS07	Soluble	Solid	DI Leach	
890-3722-6	FS08	Soluble	Solid	DI Leach	
890-3722-7	FS09	Soluble	Solid	DI Leach	
890-3722-8	FS10	Soluble	Solid	DI Leach	
890-3722-9	SW02	Soluble	Solid	DI Leach	
890-3722-10	SW03	Soluble	Solid	DI Leach	
890-3722-11	SW04	Soluble	Solid	DI Leach	
890-3722-12	SW05	Soluble	Solid	DI Leach	
MB 880-42980/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42980/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42980/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3722-1 MS	FS03	Soluble	Solid	DI Leach	
890-3722-1 MSD	FS03	Soluble	Solid	DI Leach	
890-3722-11 MS	SW04	Soluble	Solid	DI Leach	
890-3722-11 MSD	SW04	Soluble	Solid	DI Leach	

Analysis Batch: 43004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3722-1	FS03	Soluble	Solid	300.0	42980
890-3722-2	FS04	Soluble	Solid	300.0	42980
890-3722-3	FS05	Soluble	Solid	300.0	42980
890-3722-4	FS06	Soluble	Solid	300.0	42980
890-3722-5	FS07	Soluble	Solid	300.0	42980
890-3722-6	FS08	Soluble	Solid	300.0	42980
890-3722-7	FS09	Soluble	Solid	300.0	42980
890-3722-8	FS10	Soluble	Solid	300.0	42980
890-3722-9	SW02	Soluble	Solid	300.0	42980
890-3722-10	SW03	Soluble	Solid	300.0	42980
890-3722-11	SW04	Soluble	Solid	300.0	42980
890-3722-12	SW05	Soluble	Solid	300.0	42980

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Client: Ensolum
Project/Site: Ruby Federal
SDG: 03D2057036

HPLC/IC (Continued)

Analysis Batch: 43004 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42980/1-A	Method Blank	Soluble	Solid	300.0	42980
LCS 880-42980/2-A	Lab Control Sample	Soluble	Solid	300.0	42980
LCSD 880-42980/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42980
890-3722-1 MS	FS03	Soluble	Solid	300.0	42980
890-3722-1 MSD	FS03	Soluble	Solid	300.0	42980
890-3722-11 MS	SW04	Soluble	Solid	300.0	42980
890-3722-11 MSD	SW04	Soluble	Solid	300.0	42980

Client: Ensolum

Job ID: 890-3722-1 SDG: 03D2057036

Project/Site: Ruby Federal **Client Sample ID: FS03**

Lab Sample ID: 890-3722-1

Date Collected: 12/28/22 08:50 **Matrix: Solid** Date Received: 12/28/22 15:40

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 43081 Prep 4.97 g 5 mL 01/03/23 13:31 EL **EET MID** 8021B Analysis 1 5 mL 5 mL 43042 01/04/23 01:49 MNR **EET MID** Analysis Total BTEX 43128 01/04/23 09:17 ΑJ EET MID

Total/NA Total/NA Total/NA Total/NA 8015 NM **EET MID** Analysis 1 43155 01/04/23 11:53 SM Total/NA 8015NM Prep 43037 01/03/23 08:31 EET MID Prep 10.03 g 10 mL DM Total/NA Analysis 8015B NM 1 uL 1 uL 43029 01/03/23 13:29 SM **EET MID** Soluble DI Leach 4.99 g 50 mL 42980 12/30/22 13:19 KS EET MID Leach Soluble Analysis 300.0 0 mL 1.0 mL 43004 12/31/22 07:50 СН **EET MID**

Client Sample ID: FS04 Lab Sample ID: 890-3722-2

Date Collected: 12/28/22 08:55 **Matrix: Solid**

Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43081	01/03/23 13:31	EL	EET MIC
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 02:09	MNR	EET MIC
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MIC
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MIC
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43037	01/03/23 08:31	DM	EET MIC
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 13:51	SM	EET MIC
Soluble	Leach	DI Leach			5.01 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:04	CH	EET MI

Lab Sample ID: 890-3722-3 **Client Sample ID: FS05**

Date Collected: 12/28/22 09:00 **Matrix: Solid** Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 02:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	43029	01/03/23 14:36	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		5	0 mL	1.0 mL	43004	12/31/22 08:09	CH	EET MID

Client Sample ID: FS06 Lab Sample ID: 890-3722-4

Matrix: Solid Date Collected: 12/28/22 09:05 Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 02:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID

Job ID: 890-3722-1 SDG: 03D2057036

Client: Ensolum Project/Site: Ruby Federal

Lab Sample ID: 890-3722-4

Matrix: Solid

Client Sample ID: FS06

Date Collected: 12/28/22 09:05 Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 12:22	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:13	CH	EET MID

Client Sample ID: FS07 Lab Sample ID: 890-3722-5 **Matrix: Solid**

Date Collected: 12/28/22 09:10 Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 05:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 14:58	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:18	CH	EET MID

Client Sample ID: FS08 Lab Sample ID: 890-3722-6 **Matrix: Solid**

Date Collected: 12/28/22 09:15 Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 05:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 15:19	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:32	CH	EET MID

Client Sample ID: FS09 Lab Sample ID: 890-3722-7

Date Collected: 12/28/22 10:00 Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	43042	01/04/23 03:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		5	10.01 g 1 uL	10 mL 1 uL	43037 43029	01/03/23 08:31 01/03/23 14:14	DM SM	EET MID EET MID

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Matrix: Solid

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: FS09 Lab Sample ID: 890-3722-7 Date Collected: 12/28/22 10:00

Matrix: Solid Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		10	0 mL	1.0 mL	43004	12/31/22 08:37	CH	EET MID

Client Sample ID: FS10 Lab Sample ID: 890-3722-8

Date Collected: 12/28/22 10:05 **Matrix: Solid**

Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	43042	01/04/23 03:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 15:41	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:42	CH	EET MID

Client Sample ID: SW02 Lab Sample ID: 890-3722-9

Date Collected: 12/28/22 10:10 **Matrix: Solid** Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 06:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 16:03	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:46	CH	EET MID

Client Sample ID: SW03 Lab Sample ID: 890-3722-10

Date Collected: 12/28/22 10:15 Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 06:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 16:25	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:51	CH	EET MID

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Matrix: Solid

Job ID: 890-3722-1

Client: Ensolum Project/Site: Ruby Federal SDG: 03D2057036

Client Sample ID: SW04 Lab Sample ID: 890-3722-11

Date Collected: 12/28/22 10:20 Matrix: Solid Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 06:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 17:09	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 08:56	CH	EET MID

Client Sample ID: SW05 Lab Sample ID: 890-3722-12 Date Collected: 12/28/22 10:25 Matrix: Solid

Date Received: 12/28/22 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43081	01/03/23 13:31	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43042	01/04/23 07:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43128	01/04/23 09:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43155	01/04/23 11:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43037	01/03/23 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43029	01/03/23 17:31	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	42980	12/30/22 13:19	KS	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	43004	12/31/22 09:10	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-3722-1
Project/Site: Ruby Federal SDG: 03D2057036

Laboratory: Eurofins Midland

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

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

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Method Summary

Client: Ensolum Job ID: 890-3722-1
Project/Site: Ruby Federal SDG: 03D2057036

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

Protocol References:

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3722-1 SDG: 03D2057036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3722-1	FS03	Solid	12/28/22 08:50	12/28/22 15:40	4
890-3722-2	FS04	Solid	12/28/22 08:55	12/28/22 15:40	4
890-3722-3	FS05	Solid	12/28/22 09:00	12/28/22 15:40	4
390-3722-4	FS06	Solid	12/28/22 09:05	12/28/22 15:40	4
90-3722-5	FS07	Solid	12/28/22 09:10	12/28/22 15:40	4
90-3722-6	FS08	Solid	12/28/22 09:15	12/28/22 15:40	4
00-3722-7	FS09	Solid	12/28/22 10:00	12/28/22 15:40	4
0-3722-8	FS10	Solid	12/28/22 10:05	12/28/22 15:40	4
90-3722-9	SW02	Solid	12/28/22 10:10	12/28/22 15:40	0 - 4
90-3722-10	SW03	Solid	12/28/22 10:15	12/28/22 15:40	0 - 4
0-3722-11	SW04	Solid	12/28/22 10:20	12/28/22 15:40	0 - 4
90-3722-12	SW05	Solid	12/28/22 10:25	12/28/22 15:40	0 - 4

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Environment Testing

Xerro

Project Man ager.

Company Name:

Ensolum, LLC Josh Adams

Bill to: (if different)

Company Name: Address:

> Ensolum, LLC Kalei Jennings

City, State ZIP:

Carlsbad, NM 88220 3122 Nat'l Parks Highway

303-517-8437

Email: jadams@ensolum.com, kjennings@ensolum.com

City, State ZIP:

Carlsbad, NM 88220

3122 Nat'l Parks Highway

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Chain of Custody

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

	Preservative Codes	Prese		EQUEST	G
		Other	ADaPT 🗆	Deliverables: EDD	_
	P Level IV	☐ TRRI	PST/UST	Reporting: Level III Level III PST/UST TRRP Level IV	
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		nments	Work Order Comments	Wor	
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nature) Date/Time	e) Received by: (Signature)	Relinquished by: (Signature)	ime	Date/Time		: (Signature)	Received by: (Signature	>	limuished by: (Signature)	
ated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurotins Aenco, its ariliates and succontractors. It assigns standard terms and conditions notice: Signature of this document and relinquishment 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 servence. Each Suprementation of the control of servence and analyzed. These terms will be enforced unless previously negotiated.	o, its amiliates and succontractors. Its urned by the client if such losses are nco, but not analyzed. These terms w	or expenses inco	nt company to r any losses ple submitte	order from clies esponsibility fo \$5 for each sam	is a valid purchase Ill not assume any r ct and a charge of	of samples constitute t of samples and sha applied to each proje	nquishment only for the cos	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurolins Xenco, its armiates and Notice: Signature of this document and relinquishment of samples and shall not assume any responsibility for any losses or expenses incurred by the client of servects. 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 of servects. A militimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyze the control of the contr	Notice: Signatu
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Se Ag SiO ₂ Na Sr II Sn U V Zn	K Se	Cd Ca Cr Co Cu He Pb	Ba Be B	Al Sb As	13PPM Texas 11 Al	RA 13PPM	8RCRA	200.8 / 6020:	0	Total 20
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Sample Comments of			CHL	BTE	Comp Cont	Sampled Depth	Sampled San	Matrix	Sample Identification	Sampl
3 0	-		ORIE		Grab	2	Corrected Telliperature		rs:	Total Costitainers
SAPC	of Custody	Custody	ES			-	Temperature Reading	NIA	y Seals: Yes No	Sample Custody Seals:
Zn Acetate+NaOH: Zn		890-3733 65			2	200	Correction Factor.	N	Seals: Yes No	40
Na.S.O. Naso.			_			NA8	Thermometer ID:		17	Samples Recei
Nation : NATIO					6		Yes No Wet Ice		RECEIPT Temp Blank:	PLE
					ters	3, 11, 200	-			100
H.SO.: H. NaOH: Na	_					TAT starts the day received by		Julianna Falcomata		Sampler's Name
<u>u</u>						Date:	72500 Due Date:	8-103	20,210,7	Pluject I Caration
None: NO DI Water: H ₂ O					Code	utine 🗌 Rush	☐ Routine	1036	ラインでする	Project Na The
Preservative Codes	JEST	ANALYSIS REQUEST				Turn Around	_	0 1010	0,00,00	F
									303-517-0437	Phone:

Relinquished by: (Signature)

E

3

2.38.32

Received by: (Signature)

Received by: (Signature)

Total 200.7 / 6010

200.8 / 6020:

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 Notice: Signature of this document and summer and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Xenco, but not analyzed. These terms will be enforced unless previously regordated of Eurofins Xenco. A minimum charge of \$55.00 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 regordated of Eurofins Xenco. A minimum charge of \$55.00 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 regordated.

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

eurofins

Environment Testing

Xenco

Project Manager Company N -- me:

Ensolum, LLC

Josh Adams

Bill to: (if different)

Ensolum, LLC

Kalei Jennings

3122 Nat'l Parks Highway Carlsbad, NM 88220

3122 Nat'l Parks Highway

Carlsbad, NM 88220 303-517-8437

Email: jadams@ensolum.com, kjennings@ensolum.com

ANALYSIS REQUEST

City, State ZIP: Address: Company Name:

Turn Around

☐ Rush

Code

Phone: City, State ZIP Address

Project N ame: Project Number: Project Location: Sample T's Name

Harapa Tridu

US 02057036

2.20078 -103, 7250 Due Date:
Julianna Falcomata TAT starts the

SAM PLE RECEIPT

Temp Blank

Yes No

Wet ice:

Yes

No

Parameters

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

Yes

8

N_O O

NA NA

Temperature Reading Correction Factor Thermometer ID:

Corrected Temperature:

Samp les Received Intact

Sam sple Custody Seals: Cooker Custody Seals:

> Yes Yes

otes Containers

Sample Identification

Matrix

Sampled

Sampled

Time

Depth 3

> Comp Grab/

Cont # 01

BTEX

TPH

CHLORIDES

12-28-12 2-18-12

020

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SOCIE SUCH

Chain of Custody

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

				<u></u>		
Deliverables: EDD ADaPT D	Reporting: Level III Level III PST/UST Trans	State of Project: NM	Program: UST/PST PRP Brownfields	Work Order Community	www.xenco.com	

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BRCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO, Na Sr Tl Sn Hg: 1631/245.1/7470/7471 ADapt [] DAPP223U4426 NaOH+Ascorbic Acid: SA聚C Zn Acetate+NaOH: Zn H3PO4: HP Na2S2O3 NaSO3 NaHSO, NABIS H2SO4: H2 HCL: HC Cool: Cool None: NO Revised Date: 08/25/2020 Re Sample Comments Preservative Co. U V Zn Date/Time Other: NaOH: Na HNO3: HA DI Water MeOH: M of 36 Released to Imaging: 8/4/2023 10:02

1/4/2023

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3722-1 SDG Number: 03D2057036

Login Number: 3722 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3722-1 SDG Number: 03D2057036

List Source: Eurofins Midland

List Creation: 12/30/22 11:10 AM

Login Number: 3722 List Number: 2 Creator: Teel, Brianna

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

Released to Imaging: 8/4/2023 10:02:40 AM

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/2/2023 2:51:57 PM Revision 2

JOB DESCRIPTION

Ruby Federal SDG NUMBER Lea

JOB NUMBER

890-3774-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

Authorization

Generated 2/2/2023 2:51:57 PM Revision 2

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

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

Companies

Client: Ensolum
Project/Site: Ruby Federal
Laboratory Job ID: 890-3774-1
SDG: Lea

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Definitions/Glossary

Client: Ensolum Job ID: 890-3774-1

Project/Site: Ruby Federal SDG: Lea

Qualifiers

GC VOA

Qualifier **Qualifier Description** F1 MS and/or MSD recovery exceeds control limits.

MS/MSD RPD exceeds control limits F2

U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
-----------	-----------------------

LCS and/or LCSD is outside acceptance limits, low biased. S1+ Surrogate recovery exceeds control limits, high biased. 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	t 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 Colony Forming Unit CFU 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) Limit of Quantitation (DoD/DOE) LOQ

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

MDL Method Detection Limit MI 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

Practical Quantitation Limit PQL

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)

Too Numerous To Count **TNTC**

Released to Imaging: 8/4/2023 10:02:40 AM

Case Narrative

Client: Ensolum Job ID: 890-3774-1

SDG: Lea Project/Site: Ruby Federal

Job ID: 890-3774-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-3774-1

Revision

The report being provided is a revision of the original report sent on 1/16/2023. The report (revision 1) is being revised to include the results for the re-analysis of CI on sample SW06.

Receipt

The samples were received on 1/5/2023 3:01 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 was 3.6° C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS11 (890-3774-1), FS12 (890-3774-2), SW06 (890-3774-3) and SW07 (890-3774-4).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43832 and analytical batch 880-43866 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA

Method 8015B NM: The laboratory control sample (LCS) associated with preparation batch 880-43674 and analytical batch 880-43606 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.

Method 8015B NM: The CCV was biased high for the diesel range hydrocarbons; however, since another CCV was analyzed and acceptable in the 12 hour window the data was qualified and reported.

(CCV 880-43606/84)

Method 8015B NM: Surrogate recovery for the following sample was outside control limits: (MB 880-43674/1-A). Evidence of matrix interferences is not obvious.

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

General Chemistry

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

Organic Prep

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

VOA Prep

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

Client: Ensolum

Job ID: 890-3774-1

Project/Site: Ruby Federal SDG: Lea

Client Sample ID: FS11

Date Collected: 01/05/23 09:40

Date Received: 01/05/23 15:01

Lab Sample ID: 890-3774-1

Matrix: Solid

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:00	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/12/23 14:48	01/14/23 06:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:00	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/12/23 14:48	01/14/23 06:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/12/23 14:48	01/14/23 06:00	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/12/23 14:48	01/14/23 06:00	1
- Method: TAL SOP Total BT	EX - Total BTE	X Calculat	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/16/23 17:00	

Method: SW846 8015 NM - Die	sel Range C	Organics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/11/23 10:12	1

Analyte	Result	Qualifier	RL	Unit	D Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg	01/19/23 17:30	02/02/23 14:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg	01/19/23 17:30	02/02/23 14:11	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg	01/19/23 17:30	02/02/23 14:11	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130		01/19/23 17:30	02/02/23 14:11	1
o-Terphenyl	113		70 - 130		01/19/23 17:30	02/02/23 14:11	1

Method: EPA 300.0 - Anions, I	on Chromatography - S	oluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	164	5.00	mg/Kg			01/10/23 14:09	1

Client Sample ID: FS12

Date Collected: 01/05/23 12:10

Lab Sample ID: 890-3774-2

Matrix: Solid

Date Received: 01/05/23 15:01

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

Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/12/23 14:48	01/14/23 06:21	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/12/23 14:48	01/14/23 06:21	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/12/23 14:48	01/14/23 06:21	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/12/23 14:48	01/14/23 06:21	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/12/23 14:48	01/14/23 06:21	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/12/23 14:48	01/14/23 06:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/12/23 14:48	01/14/23 06:21	1

Client: Ensolum Project/Site: Ruby Federal

Job ID: 890-3774-1

SDG: Lea

Client Sample ID: FS12

Lab Sample ID: 890-3774-2

Matrix: Solid

Date Collected: 01/05/23 12:10 Date Received: 01/05/23 15:01

Sample Depth: 4

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102	70 - 130	01/12/23 14:48	01/14/23 06:21	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/16/23 17:00	1

ı	Mathadi CIMO AC OO AE NIME Dia	cal Dange Organica (DDO) (CC)	
ı	Method: SW846 8015 NM - Die:	sei Rande Ordanics (DRO) (GC)	

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			01/11/23 10:12	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0	mg/Kg		01/10/23 15:15	01/11/23 03:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/10/23 15:15	01/11/23 03:27	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/10/23 15:15	01/11/23 03:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112	70 - 130	01/10/23 15:15	01/11/23 03:27	1
o-Terphenyl	122	70 - 130	01/10/23 15:15	01/11/23 03:27	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	550	5.00	mg/Kg			01/10/23 14:14	1

Client Sample ID: SW06 Lab Sample ID: 890-3774-3 Matrix: Solid

Date Collected: 01/05/23 09:45 Date Received: 01/05/23 15:01

Sample Depth: 0 - 4

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

	olutilo ol guillo	- opou	uo (0 0)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:41	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/12/23 14:48	01/14/23 06:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/12/23 14:48	01/14/23 06:41	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/12/23 14:48	01/14/23 06:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			01/12/23 14:48	01/14/23 06:41	1
1 / Diffuorobenzene (Surr)	102		70 120			01/12/22 11:19	01/11/22 06:41	1

4-Bromofluorobenzene (Surr)	119	70 ₋ 130	01/12/23 14:48 01/14/23 06:41	1
1,4-Difluorobenzene (Surr)	102	70 - 130	01/12/23 14:48 01/14/23 06:41	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			01/16/23 17:00	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	74.8	50.0	mg/Kg			01/11/23 10:12	1

Matrix: Solid

Client: Ensolum Job ID: 890-3774-1 Project/Site: Ruby Federal SDG: Lea

Client Sample ID: SW06 Lab Sample ID: 890-3774-3

Date Collected: 01/05/23 09:45 Date Received: 01/05/23 15:01

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *-	50.0	mg/Kg		01/10/23 15:15	01/11/23 03:47	1
Diesel Range Organics (Over C10-C28)	74.8		50.0	mg/Kg		01/10/23 15:15	01/11/23 03:47	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/10/23 15:15	01/11/23 03:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130			01/10/23 15:15	01/11/23 03:47	1
o-Terphenyl	96		70 - 130			01/10/23 15:15	01/11/23 03:47	1
-		tography	Soluble					
Method: EPA 300.0 - Anions,	ion Chroma	lography -	COIGNIC					
Method: EPA 300.0 - Anions, Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: SW07 Lab Sample ID: 890-3774-4 Date Collected: 01/05/23 12:15 **Matrix: Solid**

Date Received: 01/05/23 15:01

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/12/23 14:48	01/14/23 07:02	1
Toluene	< 0.00199	U	0.00199	mg/Kg		01/12/23 14:48	01/14/23 07:02	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		01/12/23 14:48	01/14/23 07:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/12/23 14:48	01/14/23 07:02	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		01/12/23 14:48	01/14/23 07:02	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/12/23 14:48	01/14/23 07:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			01/12/23 14:48	01/14/23 07:02	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/12/23 14:48	01/14/23 07:02	1
Total BTEX Method: SW846 8015 NM - Dic Analyte	_		0.00398 DRO) (GC) RL	mg/Kg Unit	D	Prepared	01/16/23 17:00 Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/11/23 10:12	1
Method: SW846 8015B NM - D Analyte	_	Organics Qualifier	(DRO) (GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	49.9	mg/Kg		01/10/23 15:15	01/11/23 04:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/10/23 15:15	01/11/23 04:08	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/10/23 15:15	01/11/23 04:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Surrogate 1-Chlorooctane	%Recovery 89	Qualifier	<u>Limits</u> 70 - 130			Prepared 01/10/23 15:15	Analyzed 01/11/23 04:08	Dil Fac

Client Sample Results

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3774-1

SDG: Lea

Client Sample ID: SW07 Lab Sample ID: 890-3774-4

Date Collected: 01/05/23 12:15

Matrix: Solid

Date Received: 01/05/23 15:01 Sample Depth: 0 - 4

Method: EPA 300.0 - Anions, Id	on Chromat	ography -	Soluble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	426		5.00	mg/Kg			01/10/23 14:33	1

4

9

11

13

Surrogate Summary

Job ID: 890-3774-1 Client: Ensolum Project/Site: Ruby Federal SDG: Lea

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percent Surrogat	te Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-3774-1	FS11	117	104	
890-3774-2	FS12	112	102	
890-3774-3	SW06	119	102	
890-3774-4	SW07	115	104	
890-3817-A-4-D MS	Matrix Spike	121	100	
890-3817-A-4-E MSD	Matrix Spike Duplicate	129	98	
LCS 880-43832/1-A	Lab Control Sample	108	102	
LCSD 880-43832/2-A	Lab Control Sample Dup	106	104	
MB 880-43654/5-A	Method Blank	106	103	
MB 880-43832/5-B	Method Blank	109	99	

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)	
880-23419-A-1-D MS	Matrix Spike	81	78	
880-23419-A-1-E MSD	Matrix Spike Duplicate	80	77	
880-24224-A-1-E MS	Matrix Spike	98	104	
880-24224-A-1-F MSD	Matrix Spike Duplicate	94	100	
890-3774-1	FS11	103	113	
890-3774-2	FS12	112	122	
890-3774-3	SW06	90	96	
890-3774-4	SW07	89	95	
LCS 880-43674/2-A	Lab Control Sample	81	82	
LCS 880-45238/2-A	Lab Control Sample	75	79	
LCSD 880-43674/3-A	Lab Control Sample Dup	80	82	
LCSD 880-45238/3-A	Lab Control Sample Dup	73	79	
MB 880-43674/1-A	Method Blank	128	131 S1+	
MB 880-45238/1-A	Method Blank	110	135 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-3774-1 Project/Site: Ruby Federal

SDG: Lea

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43654/5-A

Matrix: Solid

Analysis Batch: 43866

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

Prep Batch: 43654

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/10/23 13:07	01/13/23 12:31	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/10/23 13:07	01/13/23 12:31	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/10/23 13:07	01/13/23 12:31	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/10/23 13:07	01/13/23 12:31	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/10/23 13:07	01/13/23 12:31	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/10/23 13:07	01/13/23 12:31	1

MB MB

MB MB

Surrogate	%Recovery Qualitier	Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	103	70 - 130

01/10/23 13:07 01/13/23 12:31 01/10/23 13:07 01/13/23 12:31

Prepared

Lab Sample ID: MB 880-43832/5-B

Matrix: Solid

Analysis Batch: 43866

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

Analyzed

Prep Batch: 43832

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene 01/12/23 14:48 01/14/23 00:17 <0.00200 U 0.00200 mg/Kg Toluene mg/Kg <0.00200 U 0.00200 Ethylbenzene mg/Kg <0.00200 U 0.00200 01/12/23 14:48 01/14/23 00:17 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 01/12/23 14:48 01/14/23 00:17 o-Xylene <0.00200 U 0.00200 01/12/23 14:48 01/14/23 00:17 mq/Kq

0.00400

mg/Kg

MB MB

<0.00400 U

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	01/12/23 14:48 01/14/23 00:17	1
1,4-Difluorobenzene (Surr)	99		70 - 130	01/12/23 14:48 01/14/23 00:17	1

Lab Sample ID: LCS 880-43832/1-A

Matrix: Solid

Xylenes, Total

Analysis Batch: 43866

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

Client Sample ID: Lab Control Sample Dup

01/12/23 14:48 01/14/23 00:17

Prep Batch: 43832

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Benzene 0.100 0.1081 mg/Kg 108 70 - 130 Toluene 0.100 0.1031 mg/Kg 103 70 - 130 Ethylbenzene 0.100 0.09995 mg/Kg 100 70 - 130 m-Xylene & p-Xylene 0.200 0.2033 102 70 - 130 mg/Kg 0.100 0.09880 o-Xylene mg/Kg 99 70 - 130

LCS LCS

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene (Surr)	108	70 - 130
1.4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: LCSD 880-43832/2-A

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 43866** Prep Batch: 43832 Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limit Analyte Unit %Rec Limits RPD Benzene 0.100 0.08851 mg/Kg 89 70 - 130 20

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Dil Fac

Client: Ensolum Job ID: 890-3774-1 Project/Site: Ruby Federal

SDG: Lea

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

Lab Sample ID: LCSD 880-43832/2-A

Matrix: Solid

Analysis Batch: 43866

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 43832

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08351		mg/Kg		84	70 - 130	21	35
Ethylbenzene	0.100	0.08255		mg/Kg		83	70 - 130	19	35
m-Xylene & p-Xylene	0.200	0.1689		mg/Kg		84	70 - 130	18	35
o-Xylene	0.100	0.08398		mg/Kg		84	70 - 130	16	35

LCSD LCSD

Surrogate	%Recovery Qual	ifier Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: 890-3817-A-4-D MS **Client Sample ID: Matrix Spike**

Matrix: Solid

Analysis Batch: 43866

Prep Type: Total/NA

Prep Batch: 43832

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U F1 F2	0.101	0.03806	F1	mg/Kg		38	70 - 130	
Toluene	<0.00201	U F1	0.101	0.03900	F1	mg/Kg		38	70 - 130	
Ethylbenzene	<0.00201	U F1	0.101	0.04328	F1	mg/Kg		43	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.08599	F1	mg/Kg		42	70 - 130	
o-Xylene	<0.00201	U F1	0.101	0.04492	F1	mg/Kg		44	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	121	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

Lab Sample ID: 890-3817-A-4-E MSD

Matrix: Solid

Analysis Batch: 43866

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 43832

_	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1 F2	0.0990	0.02633	F1 F2	mg/Kg		27	70 - 130	36	35
Toluene	<0.00201	U F1	0.0990	0.02875	F1	mg/Kg		28	70 - 130	30	35
Ethylbenzene	<0.00201	U F1	0.0990	0.03064	F1	mg/Kg		31	70 - 130	34	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.06396	F1	mg/Kg		32	70 - 130	29	35
o-Xylene	<0.00201	U F1	0.0990	0.03464	F1	mg/Kg		34	70 - 130	26	35

MSD MSD

Surrogate	%Recovery	Quaimer	Limits
4-Bromofluorobenzene (Surr)	129		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

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

Lab Sample ID: MB 880-43674/1-A

Matrix: Solid

Analysis Batch: 43606

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

Prep Batch: 43674

MB MB Result Qualifier RL Unit Analyte Prepared Analyzed Gasoline Range Organics <50.0 U 50.0 mg/Kg 01/10/23 15:15 01/10/23 19:56

(GRO)-C6-C10

Eurofins Carlsbad

Released to Imaging: 8/4/2023 10:02:40 AM

Client: Ensolum

Job ID: 890-3774-1

SDG: Lea

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

Lab Sample ID: MB 880-43674/1-A

Matrix: Solid

Analysis Batch: 43606

Project/Site: Ruby Federal

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

Prep Batch: 43674

ı		IVID	IVID						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/10/23 15:15	01/10/23 19:56	1
	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/10/23 15:15	01/10/23 19:56	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	01/10/23 15:15	01/10/23 19:56	1
o-Terphenyl	131	S1+	70 - 130	01/10/23 15:15	01/10/23 19:56	1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 880-43674/2-A **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 43606

Prep Batch: 43674

	Spike	LC2	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	617.8	*_	mg/Kg		62	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	842.6		mg/Kg		84	70 - 130	
C10-C28)								

LCS LCS

l	Surrogate	%Recovery	Qualifier	Limits
	1-Chlorooctane	81		70 - 130
	o-Terphenyl	82		70 - 130

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 43606

Prep Type: Total/NA Prep Batch: 43674

	Sp	ke LCSE	LCSD				%Rec		RPD	
Analyte	Add	ed Resul	t Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics		00 577.3	3 * <u>-</u>	mg/Kg	_	58	70 - 130	7	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	10	00 805.5	5	mg/Kg		81	70 - 130	5	20	
C10-C28)										

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	80	70 - 130
o-Terphenyl	82	70 - 130

Lab Sample ID: 880-23419-A-1-D MS

Lab Sample ID: LCSD 880-43674/3-A

Matrix: Solid

Analysis Batch: 43606

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

Prep Batch: 43674

7 maryolo Batom 40000									op 2	Juton: 40014
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	998	832.0		mg/Kg		81	70 - 130	
Diesel Range Organics (Over	<49.9	U	998	951.0		mg/Kg		92	70 - 130	

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	78		70 - 130

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Client: Ensolum

Job ID: 890-3774-1

SDG: Lea

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

Lab Sample ID: 880-23419-A-1-E MSD

Matrix: Solid

Analysis Batch: 43606

Project/Site: Ruby Federal

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 43674

_	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *-	997	799.9		mg/Kg		78	70 - 130	4	20
Diesel Range Organics (Over	<49.9	U	997	949.0		mg/Kg		92	70 - 130	0	20

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	77		70 - 130

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 45238

Lab Sample ID: MB 880-45238/1-A **Matrix: Solid**

Analysis Batch: 45228

	MR	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/02/23 09:29	02/02/23 08:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/02/23 09:29	02/02/23 08:59	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/02/23 09:29	02/02/23 08:59	1

MB MB Surrogate %Recovery Qualifier Limits 1-Chlorooctane 110 70 - 130 70 - 130 o-Terphenyl 135 S1+

Prepared Analyzed Dil Fac 02/02/23 09:29 02/02/23 08:59 02/02/23 09:29 02/02/23 08:59

Lab Sample ID: LCS 880-45238/2-A

Matrix: Solid

Analysis Batch: 45228

Client Sample I	D: I	Lab (Control	∣ Sampl	е
		Prep	Type:	Total/N	A
		Dro	n Rate	h · 4523	Ω

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Gasoline Range Organics 999 879.4 mg/Kg 88 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 999 947.2 mg/Kg 95 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	75	70 - 130
o-Terphenyl	79	70 - 130

Lab Sample ID: LCSD 880-45238/3-A

Matrix: Solid

Analysis Batch: 45228

Client Sample	ID:	Lab	Contro	l Sample	Dup
			Duam T	Tak	-I/NIA

Prep Type: Total/NA Prep Batch: 45238

Analysis Daton. 40220							I ICP L	Jaton	10200
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	999	761.5		mg/Kg		76	70 - 130	14	20
(GRO)-C6-C10									
Diesel Range Organics (Over	999	932.5		mg/Kg		93	70 - 130	2	20
C10-C28)									

Eurofins Carlsbad

Client: Ensolum Job ID: 890-3774-1 Project/Site: Ruby Federal

Limits

70 - 130

70 - 130

SDG: Lea

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

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Lab Sample ID: LCSD 880-45238/3-A

Matrix: Solid

o-Terphenyl

Analysis Batch: 45228

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

Prep Batch: 45238

LCSD LCSD %Recovery Qualifier Surrogate 1-Chlorooctane 73

Lab Sample ID: 880-24224-A-1-E MS **Matrix: Solid**

Lab Sample ID: 880-24224-A-1-F MSD

Analysis Batch: 45228

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 45238

MS MS %Rec Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <50.0 U 1000 1239 mg/Kg 122 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 80.3 1000 945.9 mg/Kg 87 70 - 130

C10-C28)

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

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Lab Control Sample

Matrix: Solid Prep Type: Total/NA Analysis Batch: 45228 Prep Batch: 45238

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits **RPD Analyte** Unit D %Rec I imit <50.0 U 70 - 130 Gasoline Range Organics 998 1179 mg/Kg 116 5 20 (GRO)-C6-C10 998 70 - 130 Diesel Range Organics (Over 80.3 896.5 mg/Kg 82 5 20

C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 94 70 - 130 o-Terphenyl 100

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43541/1-A Client Sample ID: Method Blank

Matrix: Solid

Analysis Batch: 43614

MB MB

Result Qualifier RL Unit Dil Fac Analyte Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 01/10/23 12:53

Lab Sample ID: LCS 880-43541/2-A

Matrix: Solid Analysis Batch: 43614

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 249.6 100 mg/Kg 90 - 110

Eurofins Carlsbad

Prep Type: Soluble

Prep Type: Soluble

Client: Ensolum Job ID: 890-3774-1

SDG: Lea

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-43541/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 43614

Project/Site: Ruby Federal

LCSD LCSD RPD Spike %Rec Result Qualifier Added Unit %Rec Limits RPD Limit Analyte D Chloride 250 249.7 mg/Kg 100 90 - 110 0 20

Lab Sample ID: 890-3774-2 MS Client Sample ID: FS12 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 43614

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Unit D %Rec Limits Analyte 550 250 110 90 - 110 Chloride 825.5 mg/Kg

Lab Sample ID: 890-3774-2 MSD Client Sample ID: FS12 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 43614

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Limits **RPD Analyte** Unit %Rec Limit Chloride 550 250 799.5 100 90 - 110 mg/Kg

Lab Sample ID: MB 880-44208/1-A **Client Sample ID: Method Blank Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 44265

MB MB

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 01/18/23 12:11 mg/Kg

Lab Sample ID: LCS 880-44208/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 44265

LCS LCS Spike %Rec Analyte Added Result Qualifier Limits Unit %Rec Chloride 250 260.1 104 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-44208/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 44265

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limits **RPD** Limit Analyte Unit D %Rec 250 Chloride 260.3 mg/Kg 104 90 - 110 20

Eurofins Carlsbad

Prep Type: Soluble

QC Association Summary

Client: Ensolum

Job ID: 890-3774-1

Project/Site: Ruby Federal

SDG: Lea

GC VOA

Prep Batch: 43654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-43654/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 43832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-1	FS11	Total/NA	Solid	5035	
890-3774-2	FS12	Total/NA	Solid	5035	
890-3774-3	SW06	Total/NA	Solid	5035	
890-3774-4	SW07	Total/NA	Solid	5035	
MB 880-43832/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-43832/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43832/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3817-A-4-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3817-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-1	FS11	Total/NA	Solid	8021B	43832
890-3774-2	FS12	Total/NA	Solid	8021B	43832
890-3774-3	SW06	Total/NA	Solid	8021B	43832
890-3774-4	SW07	Total/NA	Solid	8021B	43832
MB 880-43654/5-A	Method Blank	Total/NA	Solid	8021B	43654
MB 880-43832/5-B	Method Blank	Total/NA	Solid	8021B	43832
LCS 880-43832/1-A	Lab Control Sample	Total/NA	Solid	8021B	43832
LCSD 880-43832/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43832
890-3817-A-4-D MS	Matrix Spike	Total/NA	Solid	8021B	43832
890-3817-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43832

Analysis Batch: 44102

Lab Sample ID 890-3774-1	Client Sample ID FS11	Prep Type Total/NA	Matrix Solid	Method Total BTEX	Prep Batch
890-3774-2	FS12	Total/NA	Solid	Total BTEX	
890-3774-3	SW06	Total/NA	Solid	Total BTEX	
890-3774-4	SW07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 43606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-2	FS12	Total/NA	Solid	8015B NM	43674
890-3774-3	SW06	Total/NA	Solid	8015B NM	43674
890-3774-4	SW07	Total/NA	Solid	8015B NM	43674
MB 880-43674/1-A	Method Blank	Total/NA	Solid	8015B NM	43674
LCS 880-43674/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43674
LCSD 880-43674/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43674
880-23419-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43674
880-23419-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43674

Prep Batch: 43674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-2	FS12	Total/NA	Solid	8015NM Prep	
890-3774-3	SW06	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Job ID: 890-3774-1 Client: Ensolum Project/Site: Ruby Federal SDG: Lea

GC Semi VOA (Continued)

Prep Batch: 43674 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-4	SW07	Total/NA	Solid	8015NM Prep	
MB 880-43674/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43674/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43674/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23419-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23419-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-1	FS11	Total/NA	Solid	8015 NM	
890-3774-2	FS12	Total/NA	Solid	8015 NM	
890-3774-3	SW06	Total/NA	Solid	8015 NM	
890-3774-4	SW07	Total/NA	Solid	8015 NM	

Analysis Batch: 45228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-1	FS11	Total/NA	Solid	8015B NM	45238
MB 880-45238/1-A	Method Blank	Total/NA	Solid	8015B NM	45238
LCS 880-45238/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45238
LCSD 880-45238/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45238
880-24224-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	45238
880-24224-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45238

Prep Batch: 45238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-1	FS11	Total/NA	Solid	8015NM Prep	
MB 880-45238/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45238/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45238/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-24224-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-24224-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 43541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-1	FS11	Soluble	Solid	DI Leach	
890-3774-2	FS12	Soluble	Solid	DI Leach	
890-3774-3	SW06	Soluble	Solid	DI Leach	
890-3774-4	SW07	Soluble	Solid	DI Leach	
MB 880-43541/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3774-2 MS	FS12	Soluble	Solid	DI Leach	
890-3774-2 MSD	FS12	Soluble	Solid	DI Leach	

Analysis Batch: 43614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-1	FS11	Soluble	Solid	300.0	43541
890-3774-2	FS12	Soluble	Solid	300.0	43541
890-3774-3	SW06	Soluble	Solid	300.0	43541

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QC Association Summary

Job ID: 890-3774-1 Client: Ensolum Project/Site: Ruby Federal

SDG: Lea

HPLC/IC (Continued)

Analysis Batch: 43614 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3774-4	SW07	Soluble	Solid	300.0	43541
MB 880-43541/1-A	Method Blank	Soluble	Solid	300.0	43541
LCS 880-43541/2-A	Lab Control Sample	Soluble	Solid	300.0	43541
LCSD 880-43541/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43541
890-3774-2 MS	FS12	Soluble	Solid	300.0	43541
890-3774-2 MSD	FS12	Soluble	Solid	300.0	43541

Leach Batch: 44208

Lab Sample ID MB 880-44208/1-A	Client Sample ID Method Blank	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
LCS 880-44208/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44208/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 44265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-44208/1-A	Method Blank	Soluble	Solid	300.0	44208
LCS 880-44208/2-A	Lab Control Sample	Soluble	Solid	300.0	44208
LCSD 880-44208/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44208

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Job ID: 890-3774-1

SDG: Lea

Client Sample ID: FS11

Lab Sample ID: 890-3774-1

Matrix: Solid

Date Collected: 01/05/23 09:40 Date Received: 01/05/23 15:01

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	43832	01/12/23 14:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43866	01/14/23 06:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44102	01/16/23 17:00	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43720	01/11/23 10:12	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45238	01/19/23 17:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45228	02/02/23 14:11	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43541	01/09/23 12:54	KS	EET MIC
Soluble	Analysis	300.0		1			43614	01/10/23 14:09	CH	EET MID

Client Sample ID: FS12 Lab Sample ID: 890-3774-2 Date Collected: 01/05/23 12:10 **Matrix: Solid**

Date Received: 01/05/23 15:01

Batch Batch Dil Initial Final Batch Prepared Method Number or Analyzed **Prep Type** Type Run **Factor Amount** Amount **Analyst** Lab Total/NA Prep 5035 4.97 g 43832 01/12/23 14:48 MNR EET MID 5 mL Total/NA 8021B 5 mL 43866 01/14/23 06:21 MNR **EET MID** Analysis 5 mL 1 Total/NA Total BTEX 01/16/23 17:00 AJ Analysis 1 44102 **EET MID** Total/NA 8015 NM **EET MID** Analysis 1 43720 01/11/23 10:12 AJ Total/NA Prep 8015NM Prep 10.01 g 10 mL 43674 01/10/23 15:15 DM **EET MID** Total/NA 8015B NM 1 uL 43606 01/11/23 03:27 AJ **EET MID** Analysis 1 uL Soluble 5 g 50 mL 43541 01/09/23 12:54 KS Leach DI Leach **EET MID** Soluble 300.0 43614 01/10/23 14:14 CH Analysis 1 **EET MID**

Client Sample ID: SW06 Lab Sample ID: 890-3774-3 Date Collected: 01/05/23 09:45 **Matrix: Solid**

Date Received: 01/05/23 15:01

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43832	01/12/23 14:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43866	01/14/23 06:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44102	01/16/23 17:00	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43720	01/11/23 10:12	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43674	01/10/23 15:15	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43606	01/11/23 03:47	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		1			43614	01/10/23 14:28	CH	EET MID

Client Sample ID: SW07 Lab Sample ID: 890-3774-4 Date Collected: 01/05/23 12:15 **Matrix: Solid**

Date Received: 01/05/23 15:01

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43832	01/12/23 14:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43866	01/14/23 07:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44102	01/16/23 17:00	AJ	EET MID

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Released to Imaging: 8/4/2023 10:02:40 AM

Lab Chronicle

Client: Ensolum

Job ID: 890-3774-1 Project/Site: Ruby Federal SDG: Lea

Client Sample ID: SW07 Lab Sample ID: 890-3774-4

Date Collected: 01/05/23 12:15 **Matrix: Solid** Date Received: 01/05/23 15:01

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			43720	01/11/23 10:12	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43674	01/10/23 15:15	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43606	01/11/23 04:08	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43541	01/09/23 12:54	KS	EET MID
Soluble	Analysis	300.0		1			43614	01/10/23 14:33	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Job ID: 890-3774-1 Client: Ensolum Project/Site: Ruby Federal

SDG: Lea

Laboratory: Eurofins Midland

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

Authority	Pro	ogram	Identification Number	Expiration Date
Texas	NE	LAP	T104704400-22-25	06-30-23
The following analyte	s are included in this reno	rt but the laboratory is r	not certified by the governing authority.	This list may include analytes for
the agency does not		it, but the laboratory is i	of certified by the governing authority.	This list may include analytes for
0 ,		Matrix	Analyte	This list may include analytes for v
the agency does not	offer certification.	•	, , ,	This list may include analytes for v

Method Summary

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3774-1

SDG: Lea

Method	Method Description	Protocol	Laboratory
3021B	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
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
I Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

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Sample Summary

Client: Ensolum

Project/Site: Ruby Federal

Job ID: 890-3774-1

SDG: Lea

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3774-1	FS11	Solid	01/05/23 09:40	01/05/23 15:01	4
890-3774-2	FS12	Solid	01/05/23 12:10	01/05/23 15:01	4
890-3774-3	SW06	Solid	01/05/23 09:45	01/05/23 15:01	0 - 4
890-3774-4	SW07	Solid	01/05/23 12:15	01/05/23 15:01	0 - 4

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44

12

13

112

Relinquished by: (Signature)

Received by: (Signature)

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Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev. 2020 2

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Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

	Envi	Environment Testing	sting	Mid	and, TX (432) 704	-5440,	san Antor	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	10) 509-	1334		Work	Work Order No:	2/20
	Xenco	0		F E	Paso, T)	(915) 5 (575) 39	85-344° 2-7550,	Carlsbad	EL Paso. TX (915) 585-3443, Lubbock, TX (806) 794-1295 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	5) /94-12	99				
	a dama			Dill to: (if diffe		Kale	Kalai lennings	ā					×	Work Order Comments	
	Ensolum 110			Company Name	me.	Ensol	Ensolum LLC					- I	rogram: UST/PST ☐ I	RC □	Superfund [
Address:	801 N Marienfeld St Suite 400	t Suite 400		Address:		601 N	Marie	feld St S	601 N Marienfeld St Suite 400			S	State of Project:		
6 7 IP	Midland TX 79701			City. State ZIP	ا ق	Midlar	Midland, TX 79701	79701				70	Reporting: Level II 🔲 Le	Reporting: Level III DLevel III PST/UST TRRP	Level IV
	303-517-8437		Email:	Email: kiennings@ensolum.com, jadams@ensolum.com	ensolur	n.com,	iadam	s@ens	olum.co	m			Deliverables: EDD	ADaPT Other:	
Name:	Ruhy Federal	deral	Turn	Turn Around						ANALYS		IS REQUEST	EST	Preservative Codes	e Codes
Project Number:	03D2057036	7036	☑ Routine	Rush	Pres.									None: NO	DI Water: H ₂ O
Project Location:	Lea		Due Date:											<u>u</u>	MeOH: Me
Sampler's Name:	Peter Van Patten	Patten	TAT starts the	TAT starts the day received by	ьу					_	_	-			HNC ₃ : HN
PO#:			the lab, if rec	the lab, if received by 4:30pm											NaCH: Na
SAMPLE RECEIPT	Temp Blank:	: (Cyes) No	Wet ice:	Yes No	nete).0)				₫				H ₃ PO ₄ : HP	
Samples Received Intact:	tact: (Yes) No	Thermometer ID:	er iD:	TORMOG	111	300								NaHSO4: NABIS	
Cooler Custody Seals:	Yes No	_	actor:	3 -0	P	EPA				890	890-3774 C	hain of	4 Chain of Custody	Zn Acetate+NaOH: Zn	
Total Containers:	100	Corrected Temperature	Corrected Temperature:	3,6	Ш	IDES	15)	3021)	200	_	_		_	NaOH+Ascorbic Acid: SAPC	
Sample Identification		Matrix Date Sampled	Time Sampled	Depth Comp	b/ # of np Cont	CHLOR	TPH (8	BTEX (Sample Comments	mments
FS11	Soil	il 1/5/2023	3 940	4' Comp	np 1	×	×	×						AFE00000002142	0002142
FS12	2 Soil		3 1210	4' Comp	ا ا	×	×	×				_			
SW06	6 Soil	il 1/5/2023	945	0'-4' Comp	np 1	×	×	×	H			_		Cost Code: GA130323	SA130323
SW07	7 Soil	1/5/2023	1215	0'-4' Comp	np 1	×	×	×	+	+		\perp			
					\parallel					H					
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Total 200.7 / 6010	10 200.8 / 6020:		8RCRA 13PPM	PM Texas 11	≥	Sb As	Ba	Be B Cd	Ca Cr	S	Cu Fe	Pb M	Mg Mn Mo Ni K Se	TI Sn U V	Zn
Circle Method(s) and Metal(s) to be analyzed	id Metal(s) to be an	nalyzed	TCLP / S	TCLP / SPLP 6010: 8RCRA	8RCRA		s Ba	Be Cd	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	Cu P	b Mn	o Z	Se Ag TI U	Hg: 1631 / 245.1 / 7470 / 7471	471
Notice: Signature of this d	ocument and relinquishn	nent of samples co	stitutes a valid pu	rchase order fro	om client o	ompany	to Eurof	ns Xenco,	Its affiliat	es and su	bcontract	ors. It as	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 are constituted by the client if such losses are due to circumstances beyond the contract.	conditions the control	
of Eurofins Xenco. A mini	mum charge of \$85.00 w	III be applied to eac	n project and a cha	arge of \$5 for ea	ch sample	submitte	ed to Eur	ofins Xen	o, but not	analyzed	. These re	rms will	of Eurofins Xenco. A minimum charge of \$86.00 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.	sly negotiated.	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3774-1 SDG Number: Lea

Login Number: 3774 **List Source: Eurofins Carlsbad**

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-3774-1 SDG Number: Lea

List Source: Eurofins Midland

Login Number: 3774 List Number: 2

List Creation: 01/09/23 08:26 AM

Creator: Rodriguez, Leticia

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

Released to Imaging: 8/4/2023 10:02:40 AM

<6mm (1/4").



April 11, 2023

KALEI JENNINGS

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: RUBY FEDERAL

Enclosed are the results of analyses for samples received by the laboratory on 04/05/23 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



Analytical Results For:

ENSOLUM, LLC KALEI JENNINGS 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 04/05/2023
Reported: 04/11/2023

Project Name: RUBY FEDERAL
Project Number: 03D20257036
Project Location: 32.8302,-103.7919

Sampling Date: 04/03/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: FS02 A 4.5' (H231592-01)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/07/2023	ND	2.14	107	2.00	6.73	
Toluene*	<0.050	0.050	04/07/2023	ND	2.17	108	2.00	6.51	
Ethylbenzene*	<0.050	0.050	04/07/2023	ND	2.12	106	2.00	8.03	
Total Xylenes*	<0.150	0.150	04/07/2023	ND	6.63	111	6.00	8.73	
Total BTEX	<0.300	0.300	04/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/06/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2023	ND	179	89.5	200	3.01	
DRO >C10-C28*	<10.0	10.0	04/08/2023	ND	167	83.3	200	7.34	
EXT DRO >C28-C36	<10.0	10.0	04/08/2023	ND					
Surrogate: 1-Chlorooctane	84.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.5	% 49.1-14	8						

A ... - I. ... - - I D. ... 311 /

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Analytical Results For:

ENSOLUM, LLC KALEI JENNINGS 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 04/05/2023 Sampling Date: 04/03/2023

Reported: 04/11/2023 Sampling Type: Soil
Project Name: RUBY FEDERAL Sampling Condition: Cool & Intact

Project Number: 03D20257036 Sample Received By: Shalyn Rodriguez
Project Location: 32.8302,-103.7919

Sample ID: FS03 A 4.5' (H231592-02)

BTEX 8021B	mg,	'kg	Analyze	ed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/07/2023	ND	2.14	107	2.00	6.73	
Toluene*	<0.050	0.050	04/07/2023	ND	2.17	108	2.00	6.51	
Ethylbenzene*	<0.050	0.050	04/07/2023	ND	2.12	106	2.00	8.03	
Total Xylenes*	<0.150	0.150	04/07/2023	ND	6.63	111	6.00	8.73	
Total BTEX	<0.300	0.300	04/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/06/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2023	ND	179	89.5	200	3.01	
DRO >C10-C28*	<10.0	10.0	04/08/2023	ND	167	83.3	200	7.34	
EXT DRO >C28-C36	<10.0	10.0	04/08/2023	ND					
Surrogate: 1-Chlorooctane	87.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.1	% 49.1-14	8						

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Analytical Results For:

ENSOLUM, LLC KALEI JENNINGS 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 04/05/2023 Sampling Date: 04/03/2023

Reported: 04/11/2023 Sampling Type: Soil

Project Name: RUBY FEDERAL Sampling Condition: Cool & Intact
Project Number: 03D20257036 Sample Received By: Shalyn Rodriguez

Analyzed By: 1H /

Project Location: 32.8302,-103.7919

Sample ID: FS04 A 4.5' (H231592-03)

RTFY 8021R

BIEX 8021B	тд/кд		Anaiyze	Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene* <0.050		0.050	04/07/2023	ND	2.14	107	2.00	6.73	
Toluene*	<0.050	0.050	04/07/2023	ND	2.17	108	2.00	6.51	
Ethylbenzene*	<0.050	0.050	04/07/2023	ND	2.12	106	2.00	8.03	
Total Xylenes*	<0.150 0.150		04/07/2023	ND	6.63	111	6.00	8.73	
Total BTEX	<0.300	0.300	04/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/06/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2023	ND	179	89.5	200	3.01	
DRO >C10-C28*	<10.0	10.0	04/08/2023	ND	167	83.3	200	7.34	
EXT DRO >C28-C36	<10.0	10.0	04/08/2023	ND					
Surrogate: 1-Chlorooctane	81.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.4	% 49.1-14	8						

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Analytical Results For:

ENSOLUM, LLC KALEI JENNINGS 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 04/05/2023 Sampling Date: 04/03/2023

Reported: 04/11/2023 Sampling Type: Soil

Project Name: RUBY FEDERAL Sampling Condition: Cool & Intact
Project Number: 03D20257036 Sample Received By: Shalyn Rodriguez

Analyzed By: JH/

Project Location: 32.8302,-103.7919

Sample ID: FS05 A 4.5' (H231592-04)

BTEX 8021B

	9,	9	7	7: 5::.,					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/07/2023	ND	2.14	107	2.00	6.73	
Toluene*	<0.050	0.050	04/07/2023	ND	2.17	108	2.00	6.51	
Ethylbenzene*	<0.050	0.050	04/07/2023	ND	2.12	106	2.00	8.03	
Total Xylenes*	<0.150	0.150	04/07/2023	ND	6.63	111	6.00	8.73	
Total BTEX	<0.300	0.300	04/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/06/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2023	ND	191	95.3	200	0.900	
DRO >C10-C28*	<10.0	10.0	04/10/2023	ND	192	95.8	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	04/10/2023	ND					
Surrogate: 1-Chlorooctane	88.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.6	% 49.1-14	8						

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Analytical Results For:

ENSOLUM, LLC KALEI JENNINGS 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 04/05/2023 Sampling Date: 04/03/2023

Reported: 04/11/2023 Sampling Type: Soil Project Name: **RUBY FEDERAL** Sampling Condition:

Cool & Intact Sample Received By: Shalyn Rodriguez Project Number: 03D20257036

Project Location: 32.8302,-103.7919

Sample ID: FS09 A 4.5' (H231592-05)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/07/2023	ND	2.14	107	2.00	6.73	
Toluene*	<0.050	0.050	04/07/2023	ND	2.17	108	2.00	6.51	
Ethylbenzene*	<0.050	0.050	04/07/2023	ND	2.12	106	2.00	8.03	
Total Xylenes*	<0.150 0.150		04/07/2023	ND	6.63	111	6.00	8.73	
Total BTEX	<0.300 0.300		04/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	loride, SM4500Cl-B mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/06/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2023	ND	191	95.3	200	0.900	
DRO >C10-C28*	<10.0	10.0	04/10/2023	ND	192	95.8	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	04/10/2023	ND					
Surrogate: 1-Chlorooctane	82.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.1	% 49.1-14	8						

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Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: English 110	0 177 (010) 000-2410	K	
Company Name: Ensolum, LLC		BILL TO	
Project Manager: Kalei Jennings			ANALYSIS REQUEST
Address: 601 N Marienfeld Street, Suite 400	Suite 400	Company: Ensolum 11 C	
City: Midland	State: TX Zip: 79701		
Phone #: 817-683-2503		Additional Jennings	
Project #: 03D20257036	Project Owner	Address:	9.0
Project Name: Ruby Federal		city:	300
The state of the s		State: Zip:	15
Project Location: 32.8302,-103.7919	19	Phone #:	*A
Sampler Name: Peter Van Patten		Total and the second	
FOR LAB USE DNLY		Fax #:	5
THE USE UPL	MATRIX	PRESERV. SAMPLING	115
Lab I.D. Sample I.D.	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER: ACID/BASE: CE/COOL OTHER:	Chlorides TPH (80 BTEX (80
1 F50ZA	-	1.3.25	
Q F503 A	4.5,		
3 FSO4A	1.8,	11.7.7.5	
V 5054	4.5' (1)	+	
V bost	4.5	n,	
		4.2.W 2.2.2.h	
PLEASE NOTE: Liability and Damages. Cardinal's liability and analyses. All claims including those for negligence and any oth service. In no event shall Cardinal be liable for incidental or con-	client's exclusive rem er cause whatsoever	ody for any claim arising whether based in contract or fort, shall be limited to the amount paid by the client for the shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the sa	odicable
Relinquished By:	Date: Received By:	ses of whether such claim is based upon any of the above stated reapons or otherwise, ad By: Verbal Result: All Results are emails	It: ☐ Yes ☑ No Add'l Phone #:
Relinquished By:	Date: Received By:	Kigunturgs@ REMARKS: * CUSTO	of Tednosted Chands
Delivered By: (Circle One) Sampler - UPS - Bus - Other	Sample Cool Inta	dition CHECKED BY: Turnaround Time:	Standard Bacteria (only) S
	Correction Town O. 8.2 Ares TY	- W	Name



APPENDIX D

NMOCD Notifications

From: Enviro, OCD, EMNRD

To: Kalei Jennings

Cc: <u>Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD</u>

Subject: RE: [EXTERNAL] Maverick Permian - Sampling Notification (Week of 4/3/2023)

Date: Tuesday, April 4, 2023 9:16:29 AM

Attachments: <u>image005.jpg</u>

image006.png image007.png image008.png image009.png

[**EXTERNAL EMAIL**]

Kalei,

Please be aware that 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 insure 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: Kalei Jennings <kjennings@ensolum.com>

Sent: Tuesday, April 4, 2023 8:11 AM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Subject: [EXTERNAL] Maverick Permian - Sampling Notification (Week of 4/3/2023)

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

All,

Maverick Permian, LLC (Maverick) plans to complete sampling activities at the following site the week of April 3, 2023.

- Grayburg Eumont Straw Battery/ NAPP2302036818
 - Sampling Date: 4/5/2023 & 4/6/2023
- Ruby Federal / NAPP2231448981

• Sampling Date: 4/5 /2023 2023

• EVGSAU 2418-001 / NAPP2231954757

• Sampling Date: 4/6/2023

• EVGSAU 2963-001/ NAPP2235371799

• Sampling Date: 4/7/2023

• MCA 351/ NAPP2302034681

• Sampling Date: 4/7/2023

Thank you,



Kalei Jennings Senior Scientist 817-683-2503 Ensolum, LLC



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	NAPP2231448981
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Ma	verick Permian, LL	С	OGRID: 331199						
Contact Name: Bryce	Wagoner			Contact Te	elephone: 928-241-1862				
Contact email: Bryce.	Wagoner@mavresou	urces.com		Incident # (assigned by OCD) NAPP2231448981					
Contact mailing address: 1410 NW County Road Hobbs, NM 88240									
		Location	of R	elease So	ource				
Latitude 32.830273 Longitude -103.791966									
Site Name: Ruby Feder	al			Site Type					
Date Release Discovere	ed October 27, 2022	•		API# (if app	olicable) 30-025-40523				
Unit Letter Section	Township	Range	T	Coun	ity				
N 17	17S	32E	Lea						
	Surface Owner: State Federal Tribal Private (Name: Nature and Volume of Release Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)								
Crude Oil		ed (bbls) 0.09 bbl		500	Volume Recovered (bbls) 0 bbls				
X Produced Water	Volume Release	ed (bbls) 8.55 bbls	3	Volume Recovered (bbls) 0.5 bbls					
	Is the concentra produced water	tion of dissolved of >10,000 mg/l?	chloride	e in the	☐ Yes ☒ No				
Condensate	Volume Release			*	Volume Recovered (bbls)				
☐ Natural Gas	Volume Release	ed (Mcf)			Volume Recovered (Mcf)				
Other (describe) Volume/Weight Released (provide units) Volume/Weight Recovered (provide units)									
1	standing fluids. The	source of the rele	ease has	been stoppe	ase occurred off pad. A vacuum truck was dispatched to ed and the impacted area has been secured. Initial				

Received by OCD: 5/17/2023 3:13:50 PMI Form C-1+1 State of New Mexico Page 2 Oil Conservation Division

	Page.	H38ec	of 144
NAPP223	14489	81	

Incident ID	NAPP2231448981
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
☐ Yes ⊠ No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
	Initial Response
The responsible p	party must undertake the following actions immediately unless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.
The impacted area ha	s been secured to protect human health and the environment.
Released materials ha	ave been contained via the use of berms or dikes, absorbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed and managed appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain why:
D 10.17.20.0 D (4) ND	
has begun, please attach	AC the responsible party may commence remediation immediately after discovery of a release. If remediation a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred at area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
regulations all operators are public health or the environr failed to adequately investig	rmation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and required to report and/or file certain release notifications and perform corrective actions for releases which may endanger ment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have ate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In f a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws
Printed Name:Bryce	O N +
Signature:	Date:11/10/2022
email:Bryce.Wago	oner@mavresources.com Telephone:928-241-1862
OCD Only	
Received by:Joce	elyn Harimon Date: 11/10/2022

	Pooled Fluids on the Surface									
	Length (ft.)	Width (ft.)	Depth (in)	# of Boundaries *edges of pool where depth is 0 . don't count shared boundaries	Oil-Water Ratio (%)	Pooled Area (ft²)	Estimated Average Depth (ft.)	Pooled Volume (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	28.0	3.0	0.5	1.0	0.01	84.0	0.0	0.6	0.01	0.62
Rectangle B	20.0	3.0	0.5	1.0	0.01	60.0	0.0	0.4	0.00	0.44
Rectangle C						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Total Volume (bbls): 1.07 0.01 1.06									

				Su	bsurface Fluid	s				
	Length (ft.)	Width (ft.)	Depth (in.)	Saturation (%) *10% in consolidated sediments after rain to 50% in sand with no precipitation	Oil-Water Ratio (%)	Area (ft²)	Volume (bbl.)	Estimated Volume in Subsurface (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	18.0	12.0	12.0	0.1	0.01	216.0	38.4	3.1	0.03	3.0
Rectangle B	15.0	7.0	12.0	0.1	0.01	105.0	18.7	1.5	0.01	1.5
Rectangle C	30.0	7.0	12.0	0.1	0.01	210.0	37.4	3.0	0.03	3.0
Rectangle D						0.0	0.0	0.0	0.00	0.0
Rectangle E						0.0	0.0	0.0	0.00	0.0
Rectangle F						0.0	0.0	0.0	0.00	0.0
Rectangle G						0.0	0.0	0.0	0.00	0.0
Rectangle H						0.0	0.0	0.0	0.00	0.0
Rectangle I						0.0	0.0	0.0	0.00	0.0
Rectangle J						0.0	0.0	0.0	0.00	0.0
	Total Volume (bbls): 7.56 0.08 7.49									

TOTAL RELEASE VOLUME (bbls): 8.6

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

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

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

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

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

CONDITIONS

Action 157787

CONDITIONS

Operator:	OGRID:
Maverick Permian LLC	331199
1111 Bagby Street Suite 1600	Action Number:
Houston, TX 77002	157787
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	11/10/2022

Page 141 of 144

Incident ID	NAPP2231448981
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	51-100 (ft bgs)		
Did this release impact groundwater or surface water?			
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 well Field data	ls.		
Data table of soil contaminant concentration data			
Depth to water determination Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release			
Boring or excavation logs			
 ✓ Photographs including date and GIS information ✓ Topographic/Aerial maps 			
☐ Laboratory data including chain of custody			

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

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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.			
Printed Name: Bryce Wagoner	Title: Permian HSE Specialist II		
Signature: My My Horizon Signature: Bryce.Wagoner@mavresources.com	Date:05/05/2023 Telephone:928-241-1862		
OCD Only Received by: Jocelyn Harimon	Date: 05/19/2023		

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Closure

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

Closure Report Attachr	nent Checklist: Each of the follow	ving items must be incl	uded in the closure report.	
✓ A scaled site and san	npling diagram as described in 19.1	5.29.11 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	e ODC District office m	ust be notified 2 days prior to final sampling)	
Description of remed	liation activities			
and regulations all operato may endanger public healt should their operations hav human health or the enviro compliance with any other restore, reclaim, and re-ve	rs are required to report and/or file of h or the environment. The acceptance failed to adequately investigate as soment. In addition, OCD acceptance federal, state, or local laws and/or agetate the impacted surface area to the 13 NMAC including notification to	certain release notification of a C-141 report by and remediate contaminate of a C-141 report door regulations. The responsible conditions that exist the OCD when reclamate	y knowledge and understand that pursuant to OCD rules ons and perform corrective actions for releases which the OCD does not relieve the operator of liability tion that pose a threat to groundwater, surface water, as not relieve the operator of responsibility for sible party acknowledges they must substantially ed prior to the release or their final land use in tion and re-vegetation are complete.	
	agoner			
Signature: //		Date:05/05/20	023	
_{email:} Bryce.Wagorler	@mavresources.com	Telephone: 928	-241-1862	
OCD Only				
Received by:	elyn Harimon	Date:	05/19/2023	
remediate contamination th		rface water, human heal	their operations have failed to adequately investigate and th, or the environment nor does not relieve the responsible	
Closure Approved by:	Nelson Velez	Date: _	08/04/2023	
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

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 217819

CONDITIONS

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	217819
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	8/4/2023