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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

☐ The source of the release has been stopped.
☐ The impacted area has been secured to protect human health and the environment.
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☐ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name _____ Title: _____

Signature:  Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

ENSOLUM

August 19, 2024

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 Addendum
Cabo Wabo Federal Com 801H
Incident Number NAPP2304550164
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request Addendum* to document depth to groundwater determination and soil sampling activities performed at the Cabo Wabo Federal Com 801H (Site), in response to the denial of a *Closure Request* submitted to the New Mexico Oil Conservation Division (NMOCD) on July 11, 2023. Based on laboratory analytical results from the soil sampling events and confirmation of depth to groundwater at the Site, COG is submitting this *Closure Request Addendum*, describing remediation that has occurred and requesting closure for Incident Number NAPP2304550164.

Details regarding the release, Site characterization, and remediation activities can be referenced in the original *Closure Request* (Appendix D) submitted on July 11, 2023. COG received the denial notice from the NMOCD on December 27, 2023. In the denial, NMOCD stated:

> *The Remediation Closure Report is Denied. The borehole located 0.8 miles away from the release area is outside of the ½ mile requirement. There are no wells within a 1/2 radius of the well location over 100' depth to groundwater. If you feel the depth to groundwater is >100', a shallow borehole can be drilled to 105' allowing for verification of the depth. If water is not visible after reaching bottom-hole and waiting 72 hours, the OCD will accept this as evidence. We would just need a copy of the driller's log. Sidewall/edge samples need to be conducted on the edge of the excavation and not 20 feet away from the edge of the excavation. The release should be horizontally delineated on all sides, including up against the secondary containment walls. Please, verify that the release did not go under the secondary containment.*

BACKGROUND

The Site is located in Unit A, Section 24, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.1222°, -103.9325°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On January 28, 2023, a temporary tank malfunctioned and released 9.0594 barrels (bbls) of produced water within the secondary containment and onto the well pad. A vacuum truck was dispatched to the site and recovered 9.0 bbls of freestanding fluids from within the containment. COG reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on February 14, 2023. The release was assigned Incident Number NAPP2304550164.

DEPTH TO GROUNDWATER DETERMINATION

On August 6, 2024, a borehole (BH01) was advanced to a depth of 110 feet below ground surface (bgs) via air rotary drill rig. The borehole was located approximately 0.45 miles west of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 100 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. Based on the confirmed depth to water greater than 100 feet bgs, the Table I Closure Criteria identified in the original *Closure Request* are applicable and appropriate for protection of groundwater at this Site. A copy of the Soil Boring/Monitoring Well Log is included in Appendix A.

SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

Between January 31, 2024, and February 24, 2024, Ensolum personnel were at the Site to collect additional assessment soil samples to laterally delineate the release. Soil samples SS18 through SS24 were collected around the release at an approximate depth of 0.25 feet bgs to confirm the lateral extent of the release. The release extent and assessment soil sample locations are presented on Figure 2. Additionally, one 5-point composite soil sample SW01 was collected from the sidewall of the excavation at depths ranging from the ground surface to 0.5 feet bgs. The excavation extent and excavation soil sample locations are presented on Figure 3. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Photographic documentation 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 strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): benzene, toluene, ethylbenzene, and total xylenes (BTEX) following United States Environmental Protection Agency (EPA) Method 8021B; total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for all soil samples (SS18 through SS24 and SW01) indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the lateral extent of the release. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

Approximately 4,178 square feet of soil with chloride concentrations exceeding 600 mg/kg and TPH concentrations exceeding 100 mg/kg, but are compliant with the Site-specific Closure Criteria, remain in place. A maximum of 155 cubic yards of soil will be removed when the well pad is reclaimed. The proposed reclamation extent is presented on Figure 4.

CLOSURE REQUEST

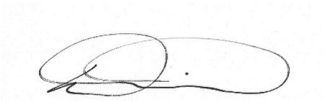
A soil boring installed within 0.45 miles of the Site confirmed depth to groundwater greater than 100 feet bgs; therefore, the Site-specific Closure Criteria presented in the original *Closure Request* was correctly applied. Laboratory analytical results for the additional soil samples collected within and around the release indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria

and successfully defined the vertical and lateral extent of the release. Based on the remediation activities completed at the Site, COG respectfully requests closure for Incident Number NAPP2304550164.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist



Daniel R. Moir, PG (Licensed in TX & WY)
Senior Managing Geologist

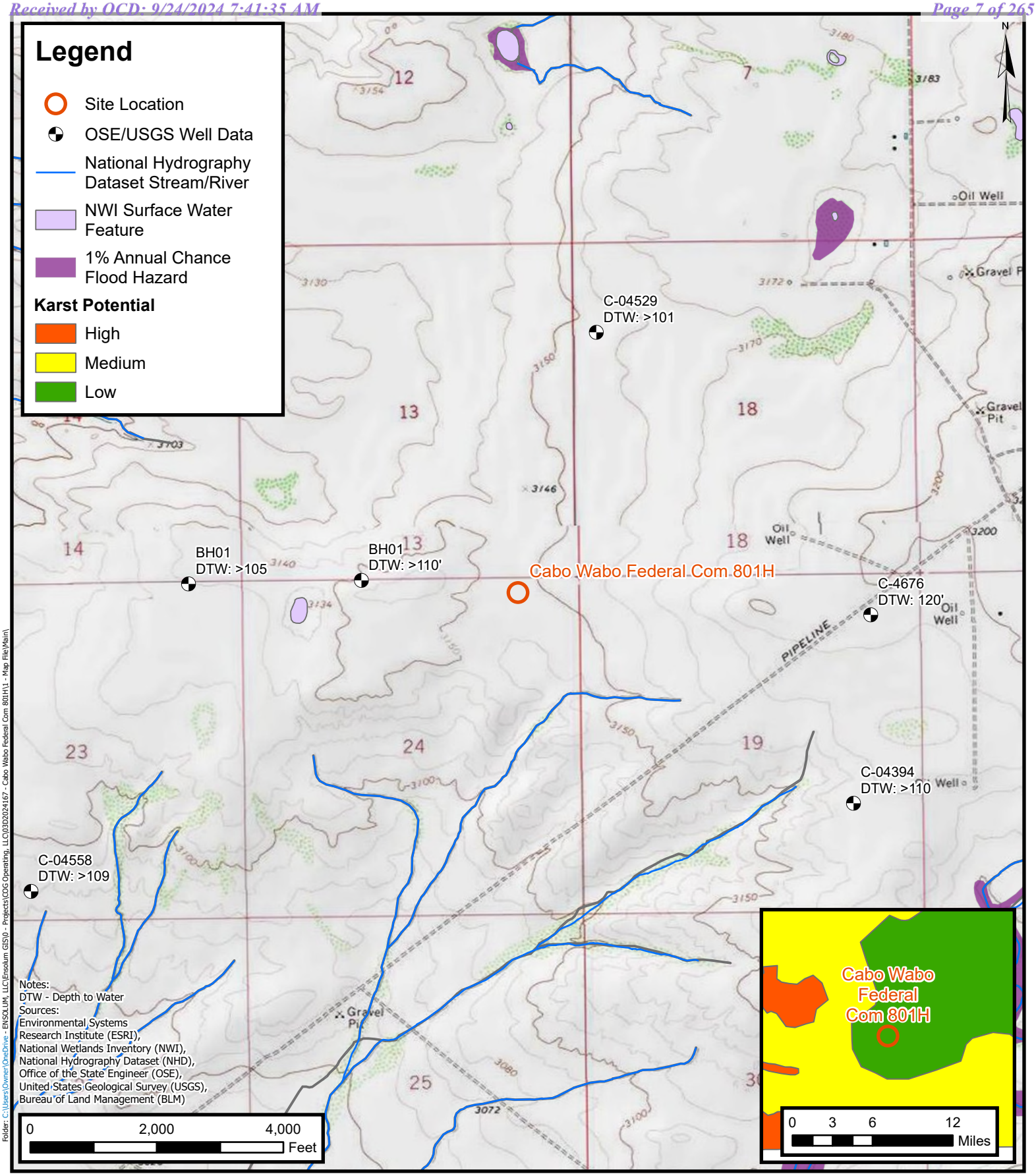
cc: Justin Carlile, COG Operating, LLC
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Assessment Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Proposed Reclamation Extent
Table 1	Soil Sample Analytical Results
Appendix A	Soil Boring/Monitoring Well Log
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	*Closure Request*, July 11, 2023

ENSOLUM

FIGURES



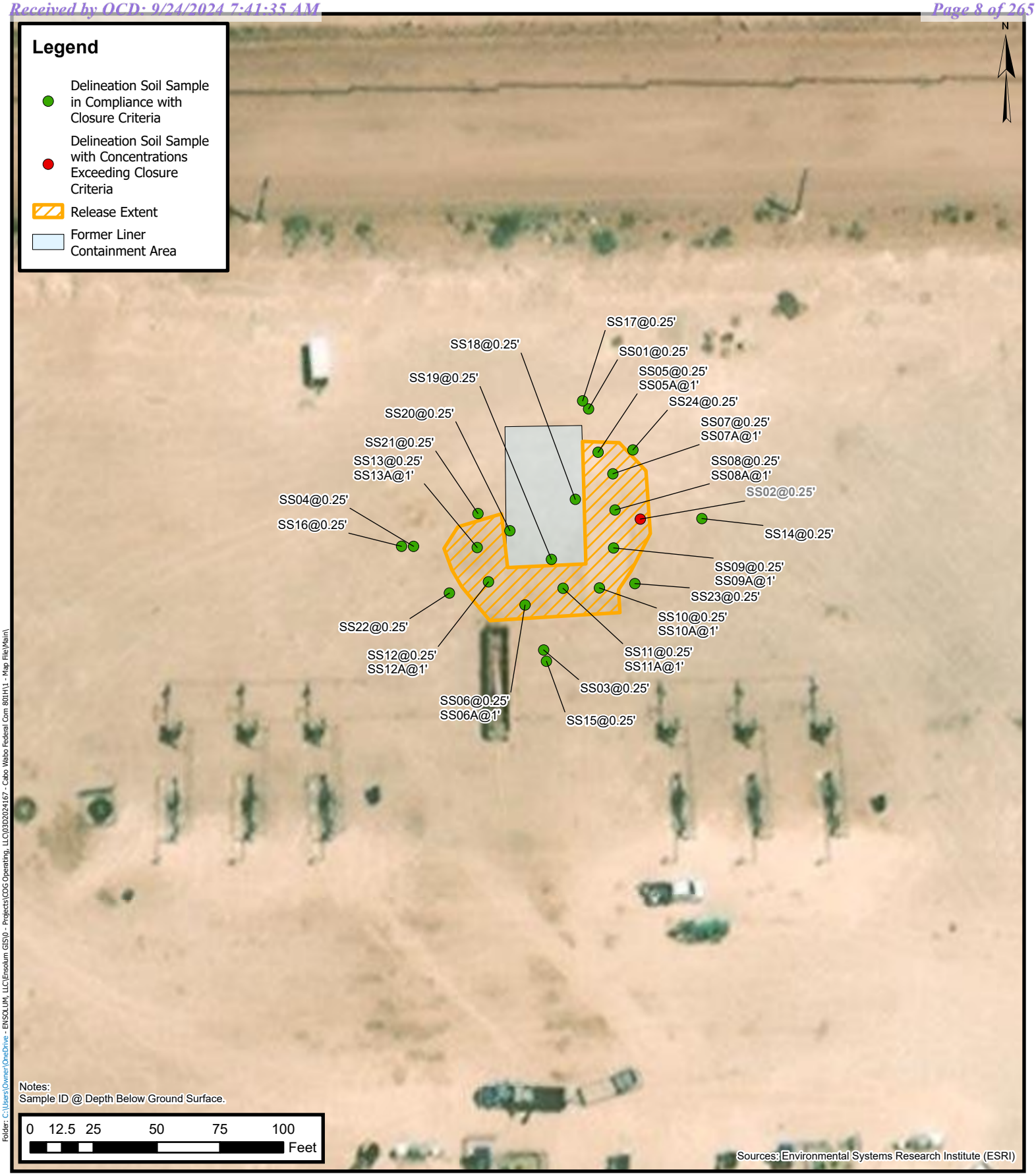
Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024167 - Cabo Wabo Federal Com 801H\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number: NAPP2304550164
Unit A, Section 24, T25S, R29E
Eddy County, New Mexico

FIGURE 1



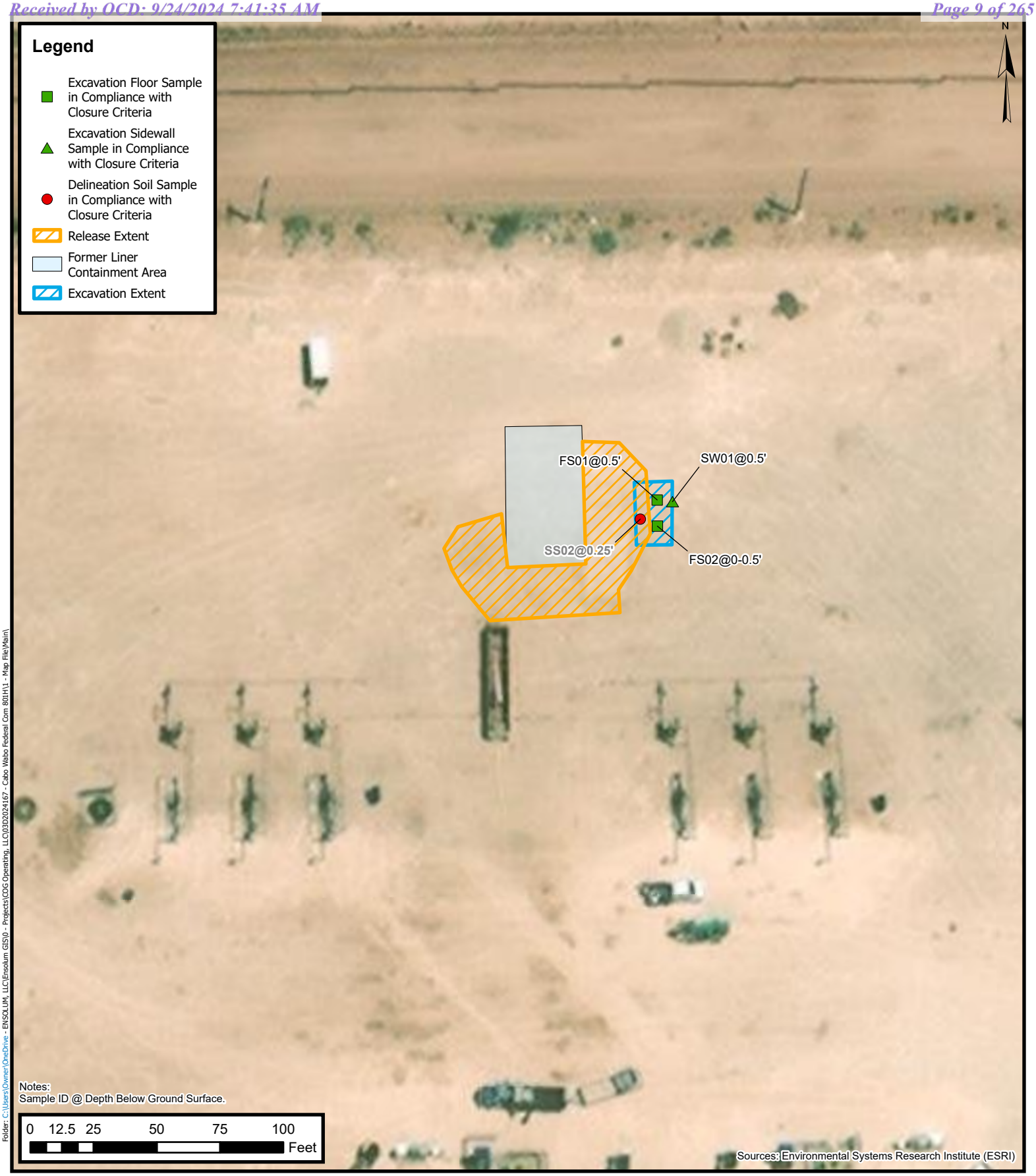
Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024167 - Cabo Wabo Federal Com 801H\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Assessment Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number: NAPP2304550164
Unit A, Section 24, T25S, R29E
Eddy County, New Mexico

FIGURE 2



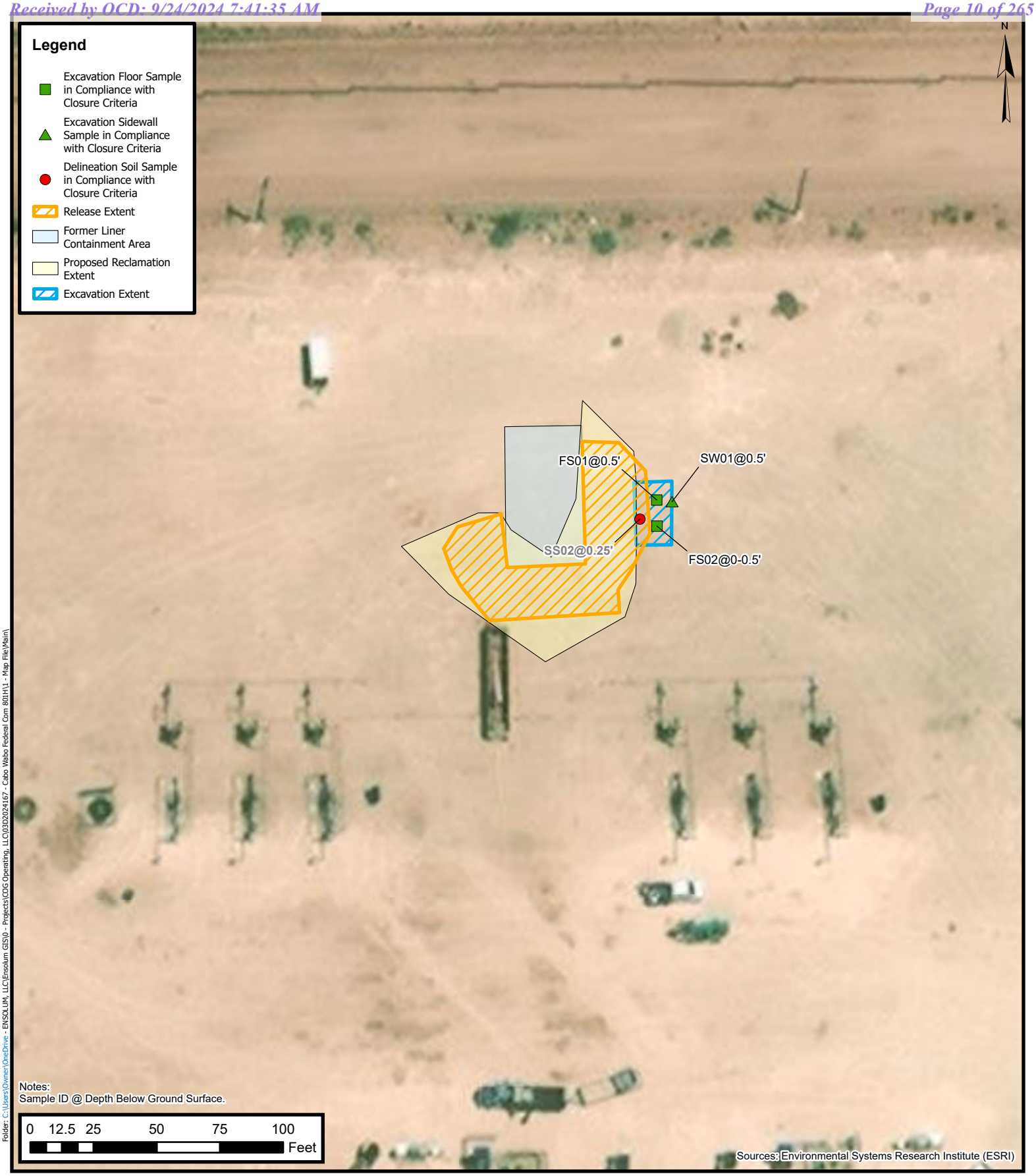
Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03D2024167 - Cabo Wabo Federal Com 801H\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number: NAPP2304550164
Unit A, Section 24, T25S, R29E
Eddy County, New Mexico

FIGURE 3



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03D2024167 - Cabo Wabo Federal Com 801H\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Reclamation Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number: NAPP2304550164
Unit A, Section 24, T25S, R29E
Eddy County, New Mexico

FIGURE 4

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Cabo Wabo Federal Com 801H
COG Operating, LLC
Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assessment Soil Samples										
SS01	03/13/2023	0.25	<0.00201	<0.00402	<49.9	139	<49.9	139	139	109
SS02	03/13/2023	0.25	<0.00202	<0.00403	<50.0	2640	<50.0	2,640	**2,640**	429
SS03	03/13/2023	0.25	<0.00199	<0.00398	<49.9	71.4	<49.9	71.4	71.4	451
SS04	03/13/2023	0.25	<0.00200	<0.00399	<49.9	987	<49.9	987	987	503
SS05	03/13/2023	0.25	<0.00200	<0.00401	<49.9	427	<49.9	427	427	8,870
SS05A	05/12/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	216
SS06	03/13/2023	0.25	<0.00199	<0.00398	<50.0	430	<50.0	430	430	3,590
SS06A	05/12/2023	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	229
SS07	03/13/2023	0.25	<0.00199	<0.00398	<50.0	965	<50.0	965	965	1,960
SS07A	05/12/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	226
SS08	03/13/2023	0.25	<0.00200	<0.00399	<49.9	169	<49.9	169	169	8,150
SS08A	05/12/2023	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	236
SS09	03/13/2023	0.25	<0.00201	<0.00402	<49.9	678	<49.9	678	678	1,500
SS09A	05/12/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	317
SS10	03/13/2023	0.25	<0.00200	<0.00401	<49.9	88.5	<49.9	88.5	88.5	335
SS10A	05/12/2023	1	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	310
SS11	03/13/2023	0.25	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	1,100
SS11A	05/12/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	313
SS12	03/13/2023	0.25	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	587
SS12A	05/12/2023	1	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	332
SS13	03/13/2023	0.25	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	4,270
SS13A	05/12/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	335

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Cabo Wabo Federal Com 801H
COG Operating, LLC
Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
SS14	05/12/2023	0.5	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	326
SS15	05/12/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	353
SS16	05/12/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	285
SS17	05/12/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	293
SS18	01/31/2024	0.25	<0.00200	<0.00401	<50.3	56.4	<50.3	56.4	56.4	386
SS19	01/31/2024	0.25	<0.00199	<0.00398	<50.1	97.7	<50.1	97.7	97.7	380
SS20	01/31/2024	0.25	<0.00199	<0.00398	<50.2	77.0	<50.2	77.0	77.0	348
SS21	01/31/2024	0.25	<0.00200	<0.00399	<50.4	88.6	<50.4	88.6	88.6	370
SS22	01/31/2024	0.25	<0.00201	<0.00402	<49.9	92.2	<49.9	92.2	92.2	368
SS23	01/31/2024	0.25	<0.00199	<0.00398	<50.0	90.3	<50.0	90.3	90.3	404
SS24	01/31/2024	0.25	<0.00199	<0.00398	<49.7	87.6	<49.7	87.6	87.6	397
Excavation Soil Samples										
FS01	05/12/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	386
FS02	05/12/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	472
SW01	02/24/2024	0 - 0.5	0.000709	<0.00101	35.1	26.5	<15.2	61.6	61.6	353

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

Grey text represents samples that have been excavated

ENSOLUM

APPENDIX A

Soil Boring / Monitoring Well Log

ENSOLUM

SOIL BORING/MONITORING WELL LOG:

This log for field use only

PROJECT NUMBER 03D2024167
PROJECT NAME CABO WABO 810H
CLIENT COG
LOCATION Eddy Co. NM
PROJECT MANAGER Hadlie Green

DRILLING DATE 8.6.24
DRILLER WTNW
LATITUDE 32.122033
LONGITUDE 103 940 481
TOC Elevation N/A

WELL DIAMETER 6 3/4
TOTAL DEPTH 110
CASING NA
SCREEN NA
SURFACE COMPLETION N/A

COMMENTS State drilling technology used, outside auger diameter, sampler type, and sampler diameter. BH-01 / AR

LOGGED BY SAD
CHECKED BY

PID	Samples	% Recovery	Water	Depth (ft)	Graphic Log	Material Description State lithology, color, plasticity (fine grain soils only), moisture, density, and odor.	Well Completion Grout Interval Bentonite Interval Sand Interval
				10 / 2		SAND, Fine grained, Pink, Poorly Sorted Dry, No Odor	
				20 / 4		Sand, Fine grained, Poorly sorted Light redd, L BRN, Dry No Odor	
				30 / 8		SAA	
				40 / 8		SAA	
				50 / 10		SAA	
				60 / 12		SAA	
				70 / 14		SAND, Light Brown, Poorly sorted, Dry No Odor	
				80 / 16		SAA	
				90 / 18		SAND, Light Reddish BRN, Poorly Sorted Dry No Odor	
				100 / 20		SAA	
				110 / 22		SAND Fine grained, Light Reddish BRN Dry, No Odor	
				24			

produced by ESlog.ESdat.net on 26 Sep 2022

ENSOLUM

SOIL BORING/MONITORING WELL LOG:

This log for field use only

PROJECT NUMBER 03D2024167	DRILLING DATE 8.6.24	WELL DIAMETER 6 3/4
PROJECT NAME CABO WAB0 810H	DRILLER WTNW	TOTAL DEPTH 110
CLIENT COG	LATITUDE 32.122033	CASING NA
LOCATION Eddy Co NM	LONGITUDE 103 940 481	SCREEN NA
PROJECT MANAGER Hadlie Green	TOC Elevation N/A	SURFACE COMPLETION N/A

COMMENTS *State drilling technology used, outside auger diameter, sampler type, and sampler diameter* BH-01 / AR

LOGGED BY SA D

CHECKED BY

PID	Samples	% Recovery	Water	Depth (ft)	Graphic Log	Material Description *State lithology, color, plasticity (fine grain soils only), moisture, density, and odor*	Well Completion *Grout Interval* *Bentonite Interval* *Sand Interval*
				10 2		SAND, Fine grained, Pink, Poorly Sorted Dry, No Odor	
				30 4		Sand, Fine grained, Poorly sorted Light reddish BRN, Dry No Odor	
				32 8		SAA	
				40 8		SAA	
				50 10		SAA	
				60 12		SAA	
				70 14		SAND, Light Brown, Poorly sorted, Dry No Odor	
				80 16		SAA	
				90 18		SAND, Light Reddish BRN, Poorly Sorted Dry No Odor	
				100 20		SAA	
				110 22		SAND Fine grained, Light Reddish BRN Dry, No Odor	
				24			

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number NAPP2304550164

Photograph 1 Date: January 31, 2024

Description: Delineations activies with secondary containment liner removed, view southwest

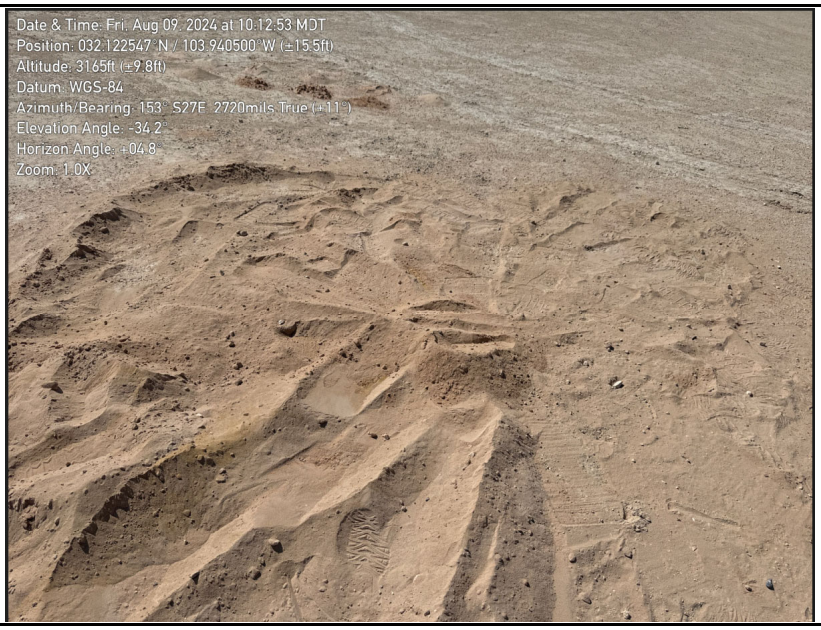
Photograph 2 Date: January 31, 2024

Description: Delineation activities with secondary containment liner removed, view northwest

Photographic Log
COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number NAPP2304550164

Photograph 1 Date: August 6, 2024

Description: Depth to water drilling activities, view north-northeast



Photograph 2 Date: August 9, 2024

Description: Plugging and abandonment of depth to water boring following field measurement of dry hole

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/13/2024 12:20:08 PM

JOB DESCRIPTION

Cabo Wabo Federal Com 801H
03D2024167

JOB NUMBER

890-6078-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

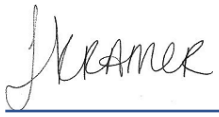
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
2/13/2024 12:20:08 PM

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

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Laboratory Job ID: 890-6078-1
SDG: 03D2024167

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum Job ID: 890-6078-1
Project: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1 Eurofins Carlsbad

Job Narrative
890-6078-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 1/31/2024 11:49 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS18 (890-6078-1), SS19 (890-6078-2), SS20 (890-6078-3), SS21 (890-6078-4), SS22 (890-6078-5), SS23 (890-6078-6) and SS24 (890-6078-7).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS18 (890-6078-1), SS19 (890-6078-2) and SS21 (890-6078-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS20 (890-6078-3), SS22 (890-6078-5) and (890-6078-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 870-17831 and analytical batch 870-17833 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.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-72129 and analytical batch 880-72321 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS18

Lab Sample ID: 890-6078-1
Matrix: Solid
Date Collected: 01/31/24 10:45
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.00401		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
Xylenes, Total	<0.00401	U F2	0.00401		mg/Kg		02/11/24 13:26	02/12/24 12:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*150*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 12:15*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*02/11/24 13:26*	*02/12/24 12:15*	*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			02/12/24 12:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**56.4**		50.3		mg/Kg			02/08/24 09:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.3	U	50.3		mg/Kg		02/02/24 16:37	02/08/24 09:47	1
Diesel Range Organics (Over C10-C28)	**56.4**		50.3		mg/Kg		02/02/24 16:37	02/08/24 09:47	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		02/02/24 16:37	02/08/24 09:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*70 - 130*	*02/02/24 16:37*	*02/08/24 09:47*	*1*
1-Chlorooctane	*89*		*70 - 130*	*02/02/24 16:37*	*02/08/24 09:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**386**		4.96		mg/Kg			02/05/24 14:47	1

Client Sample ID: SS19

Lab Sample ID: 890-6078-2
Matrix: Solid
Date Collected: 01/31/24 10:50
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 12:42*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/11/24 13:26*	*02/12/24 12:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS19

Lab Sample ID: 890-6078-2
Matrix: Solid
Date Collected: 01/31/24 10:50
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 12:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**97.7**		50.1		mg/Kg			02/08/24 10:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.1	U	50.1		mg/Kg		02/02/24 16:37	02/08/24 10:08	1
Diesel Range Organics (Over C10-C28)	**97.7**		50.1		mg/Kg		02/02/24 16:37	02/08/24 10:08	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/02/24 16:37	02/08/24 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:08*	*1*
1-Chlorooctane	*90*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**380**		5.02		mg/Kg			02/05/24 14:52	1

Client Sample ID: SS20

Lab Sample ID: 890-6078-3
Matrix: Solid
Date Collected: 01/31/24 10:55
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 13:08*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*02/11/24 13:26*	*02/12/24 13:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 13:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**77.0**		50.2		mg/Kg			02/08/24 10:28	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.2	U	50.2		mg/Kg		02/02/24 16:37	02/08/24 10:28	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS20

Lab Sample ID: 890-6078-3
Matrix: Solid
Date Collected: 01/31/24 10:55
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**77.0**		50.2		mg/Kg		02/02/24 16:37	02/08/24 10:28	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		02/02/24 16:37	02/08/24 10:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:28*	*1*
1-Chlorooctane	*87*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**348**		5.01		mg/Kg			02/05/24 14:57	1

Client Sample ID: SS21

Lab Sample ID: 890-6078-4
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*182*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 13:35*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/11/24 13:26*	*02/12/24 13:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/12/24 13:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**88.6**		50.4		mg/Kg			02/08/24 10:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.4	U	50.4		mg/Kg		02/02/24 16:37	02/08/24 10:49	1
Diesel Range Organics (Over C10-C28)	**88.6**		50.4		mg/Kg		02/02/24 16:37	02/08/24 10:49	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/02/24 16:37	02/08/24 10:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:49*	*1*
1-Chlorooctane	*82*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:49*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS21

Lab Sample ID: 890-6078-4
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**370**		5.03		mg/Kg			02/05/24 15:02	1

Client Sample ID: SS22

Lab Sample ID: 890-6078-5
Matrix: Solid
Date Collected: 01/31/24 11:05
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 14:02*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/12/24 14:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**92.2**		49.9		mg/Kg			02/08/24 11:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.9	U	49.9		mg/Kg		02/02/24 16:37	02/08/24 11:09	1
Diesel Range Organics (Over C10-C28)	**92.2**		49.9		mg/Kg		02/02/24 16:37	02/08/24 11:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/02/24 16:37	02/08/24 11:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:09*	*1*
1-Chlorooctane	*90*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**368**		4.99		mg/Kg			02/05/24 15:07	1

Client Sample ID: SS23

Lab Sample ID: 890-6078-6
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS23

Lab Sample ID: 890-6078-6
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:28*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:28*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 14:28	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**90.3**		50.0		mg/Kg			02/08/24 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0		mg/Kg		02/02/24 16:37	02/08/24 11:30	1
Diesel Range Organics (Over C10-C28)	**90.3**		50.0		mg/Kg		02/02/24 16:37	02/08/24 11:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/24 16:37	02/08/24 11:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:30*	*1*
1-Chlorooctane	*90*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**404**	**F1**	5.02		mg/Kg			02/05/24 15:12	1

Client Sample ID: SS24

Lab Sample ID: 890-6078-7
Matrix: Solid
Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:55*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:55*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS24

Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Lab Sample ID: 890-6078-7

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 14:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**87.6**		49.7		mg/Kg			02/08/24 11:51	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.7	U	49.7		mg/Kg		02/02/24 16:37	02/08/24 11:51	1
Diesel Range Organics (Over C10-C28)	**87.6**		49.7		mg/Kg		02/02/24 16:37	02/08/24 11:51	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		02/02/24 16:37	02/08/24 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:51*	*1*
1-Chlorooctane	*87*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**397**		4.99		mg/Kg			02/05/24 15:32	1

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-6078-1	SS18	150 S1+	115
890-6078-1 MS	SS18	107	79
890-6078-1 MSD	SS18	132 S1+	105
890-6078-2	SS19	142 S1+	96
890-6078-3	SS20	132 S1+	72
890-6078-4	SS21	182 S1+	96
890-6078-5	SS22	132 S1+	93
890-6078-6	SS23	115	82
890-6078-7	SS24	130	99
LCS 880-72819/1-A	Lab Control Sample	124	82
LCSD 880-72819/2-A	Lab Control Sample Dup	128	77
MB 880-72819/5-A	Method Blank	84	109

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH1 (70-130)	1CO1 (70-130)
890-6065-A-1-I MS	Matrix Spike	76	79
890-6065-A-1-J MSD	Matrix Spike Duplicate	72	75
890-6078-1	SS18	93	89
890-6078-2	SS19	98	90
890-6078-3	SS20	92	87
890-6078-4	SS21	88	82
890-6078-5	SS22	98	90
890-6078-6	SS23	97	90
890-6078-7	SS24	93	87
LCS 870-17831/1-A	Lab Control Sample	102	107
LCSD 870-17831/2-A	Lab Control Sample Dup	101	107
MB 870-17831/3-A	Method Blank	106	102

Surrogate Legend

OTPH = o-Terphenyl
1CO = 1-Chlorooctane

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72819/5-A
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72819

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/11/24 13:26	02/12/24 11:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*02/11/24 13:26*	*02/12/24 11:49*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*02/11/24 13:26*	*02/12/24 11:49*	*1*

Lab Sample ID: LCS 880-72819/1-A
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72819

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09323		mg/Kg		93	70 - 130		
Toluene			0.100	0.1125		mg/Kg		113	70 - 130		
Ethylbenzene			0.100	0.1134		mg/Kg		113	70 - 130		
m-Xylene & p-Xylene			0.200	0.2559		mg/Kg		128	70 - 130		
o-Xylene			0.100	0.1187		mg/Kg		119	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

Lab Sample ID: LCSD 880-72819/2-A
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72819

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08552		mg/Kg		86	70 - 130	9	35
Toluene			0.100	0.09515		mg/Kg		95	70 - 130	17	35
Ethylbenzene			0.100	0.1075		mg/Kg		108	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2537		mg/Kg		127	70 - 130	1	35
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*

Lab Sample ID: 890-6078-1 MS
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: SS18
Prep Type: Total/NA
Prep Batch: 72819

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0996	0.09774		mg/Kg		98	70 - 130		
Toluene	<0.00200	U	0.0996	0.09090		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

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

Lab Sample ID: 890-6078-1 MS
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: SS18
Prep Type: Total/NA
Prep Batch: 72819

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0996	0.08805		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.2238		mg/Kg		112	70 - 130
o-Xylene	<0.00200	U	0.0996	0.09037		mg/Kg		91	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 890-6078-1 MSD
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: SS18
Prep Type: Total/NA
Prep Batch: 72819

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.09057		mg/Kg		91	70 - 130	8	35
Toluene	<0.00200	U	0.0990	0.09825		mg/Kg		99	70 - 130	8	35
Ethylbenzene	<0.00200	U	0.0990	0.09332		mg/Kg		94	70 - 130	6	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.198	0.2400		mg/Kg		121	70 - 130	7	35
o-Xylene	<0.00200	U	0.0990	0.1040		mg/Kg		105	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 870-17831/3-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17831

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		02/02/24 16:37	02/08/24 03:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/02/24 16:37	02/08/24 03:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/02/24 16:37	02/08/24 03:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*106*		*70 - 130*	*02/02/24 16:37*	*02/08/24 03:55*	*1*
1-Chlorooctane	*102*		*70 - 130*	*02/02/24 16:37*	*02/08/24 03:55*	*1*

Lab Sample ID: LCS 870-17831/1-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)	1020	773.6		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	1010	960.6		mg/Kg		95	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

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

Lab Sample ID: LCS 870-17831/1-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17831

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	102		70 - 130
1-Chlorooctane	107		70 - 130

Lab Sample ID: LCSD 870-17831/2-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17831

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)			1020	776.7		mg/Kg		76	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1010	969.3		mg/Kg		96	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	101		70 - 130
1-Chlorooctane	107		70 - 130

Lab Sample ID: 890-6065-A-1-I MS
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 17831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)	<49.8	U F1	1020	620.6	F1	mg/Kg		61	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U F1	1010	735.9	F1	mg/Kg		69	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl	76		70 - 130
1-Chlorooctane	79		70 - 130

Lab Sample ID: 890-6065-A-1-J MSD
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 17831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)	<49.8	U F1	1020	650.7	F1	mg/Kg		64	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	1010	696.1	F1	mg/Kg		65	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	72		70 - 130
1-Chlorooctane	75		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-72129/1-A
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/05/24 13:43	1

Lab Sample ID: LCS 880-72129/2-A
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	244.2		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-72129/3-A
Matrix: Solid
Analysis Batch: 72321

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	244.2		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-6078-6 MS
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: SS23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	404	F1	251	625.8	F1	mg/Kg		88	90 - 110		

Lab Sample ID: 890-6078-6 MSD
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: SS23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	404	F1	251	640.5		mg/Kg		94	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

GC VOA

Prep Batch: 72819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	5035	
890-6078-2	SS19	Total/NA	Solid	5035	
890-6078-3	SS20	Total/NA	Solid	5035	
890-6078-4	SS21	Total/NA	Solid	5035	
890-6078-5	SS22	Total/NA	Solid	5035	
890-6078-6	SS23	Total/NA	Solid	5035	
890-6078-7	SS24	Total/NA	Solid	5035	
MB 880-72819/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72819/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72819/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6078-1 MS	SS18	Total/NA	Solid	5035	
890-6078-1 MSD	SS18	Total/NA	Solid	5035	

Analysis Batch: 72833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8021B	72819
890-6078-2	SS19	Total/NA	Solid	8021B	72819
890-6078-3	SS20	Total/NA	Solid	8021B	72819
890-6078-4	SS21	Total/NA	Solid	8021B	72819
890-6078-5	SS22	Total/NA	Solid	8021B	72819
890-6078-6	SS23	Total/NA	Solid	8021B	72819
890-6078-7	SS24	Total/NA	Solid	8021B	72819
MB 880-72819/5-A	Method Blank	Total/NA	Solid	8021B	72819
LCS 880-72819/1-A	Lab Control Sample	Total/NA	Solid	8021B	72819
LCSD 880-72819/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72819
890-6078-1 MS	SS18	Total/NA	Solid	8021B	72819
890-6078-1 MSD	SS18	Total/NA	Solid	8021B	72819

Analysis Batch: 73047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	Total BTEX	
890-6078-2	SS19	Total/NA	Solid	Total BTEX	
890-6078-3	SS20	Total/NA	Solid	Total BTEX	
890-6078-4	SS21	Total/NA	Solid	Total BTEX	
890-6078-5	SS22	Total/NA	Solid	Total BTEX	
890-6078-6	SS23	Total/NA	Solid	Total BTEX	
890-6078-7	SS24	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8015NM Prep	
890-6078-2	SS19	Total/NA	Solid	8015NM Prep	
890-6078-3	SS20	Total/NA	Solid	8015NM Prep	
890-6078-4	SS21	Total/NA	Solid	8015NM Prep	
890-6078-5	SS22	Total/NA	Solid	8015NM Prep	
890-6078-6	SS23	Total/NA	Solid	8015NM Prep	
890-6078-7	SS24	Total/NA	Solid	8015NM Prep	
MB 870-17831/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17831/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

GC Semi VOA (Continued)

Prep Batch: 17831 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 870-17831/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6065-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6065-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8015B NM	17831
890-6078-2	SS19	Total/NA	Solid	8015B NM	17831
890-6078-3	SS20	Total/NA	Solid	8015B NM	17831
890-6078-4	SS21	Total/NA	Solid	8015B NM	17831
890-6078-5	SS22	Total/NA	Solid	8015B NM	17831
890-6078-6	SS23	Total/NA	Solid	8015B NM	17831
890-6078-7	SS24	Total/NA	Solid	8015B NM	17831
MB 870-17831/3-A	Method Blank	Total/NA	Solid	8015B NM	17831
LCS 870-17831/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17831
LCSD 870-17831/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17831
890-6065-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	17831
890-6065-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17831

Analysis Batch: 17893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8015 NM	
890-6078-2	SS19	Total/NA	Solid	8015 NM	
890-6078-3	SS20	Total/NA	Solid	8015 NM	
890-6078-4	SS21	Total/NA	Solid	8015 NM	
890-6078-5	SS22	Total/NA	Solid	8015 NM	
890-6078-6	SS23	Total/NA	Solid	8015 NM	
890-6078-7	SS24	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 72129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Soluble	Solid	DI Leach	
890-6078-2	SS19	Soluble	Solid	DI Leach	
890-6078-3	SS20	Soluble	Solid	DI Leach	
890-6078-4	SS21	Soluble	Solid	DI Leach	
890-6078-5	SS22	Soluble	Solid	DI Leach	
890-6078-6	SS23	Soluble	Solid	DI Leach	
890-6078-7	SS24	Soluble	Solid	DI Leach	
MB 880-72129/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72129/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72129/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6078-6 MS	SS23	Soluble	Solid	DI Leach	
890-6078-6 MSD	SS23	Soluble	Solid	DI Leach	

Analysis Batch: 72321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Soluble	Solid	300.0	72129
890-6078-2	SS19	Soluble	Solid	300.0	72129
890-6078-3	SS20	Soluble	Solid	300.0	72129

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

HPLC/IC (Continued)

Analysis Batch: 72321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-4	SS21	Soluble	Solid	300.0	72129
890-6078-5	SS22	Soluble	Solid	300.0	72129
890-6078-6	SS23	Soluble	Solid	300.0	72129
890-6078-7	SS24	Soluble	Solid	300.0	72129
MB 880-72129/1-A	Method Blank	Soluble	Solid	300.0	72129
LCS 880-72129/2-A	Lab Control Sample	Soluble	Solid	300.0	72129
LCSD 880-72129/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72129
890-6078-6 MS	SS23	Soluble	Solid	300.0	72129
890-6078-6 MSD	SS23	Soluble	Solid	300.0	72129

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS18

Date Collected: 01/31/24 10:45
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 12:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 12:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 09:47	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 09:47	WP	EET DAL
Soluble	Leach	DI Leach			5.04 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 14:47	CH	EET MID

Client Sample ID: SS19

Date Collected: 01/31/24 10:50
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 12:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 12:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 10:08	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 10:08	WP	EET DAL
Soluble	Leach	DI Leach			4.98 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 14:52	CH	EET MID

Client Sample ID: SS20

Date Collected: 01/31/24 10:55
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 13:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 13:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 10:28	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 10:28	WP	EET DAL
Soluble	Leach	DI Leach			4.99 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 14:57	CH	EET MID

Client Sample ID: SS21

Date Collected: 01/31/24 11:00
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 13:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 13:35	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS21

Lab Sample ID: 890-6078-4
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			17893	02/08/24 10:49	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 10:49	WP	EET DAL
Soluble	Leach	DI Leach			4.97 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:02	CH	EET MID

Client Sample ID: SS22

Lab Sample ID: 890-6078-5
Matrix: Solid
Date Collected: 01/31/24 11:05
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 14:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 11:09	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 11:09	WP	EET DAL
Soluble	Leach	DI Leach			5.01 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:07	CH	EET MID

Client Sample ID: SS23

Lab Sample ID: 890-6078-6
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 14:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 14:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 11:30	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 11:30	WP	EET DAL
Soluble	Leach	DI Leach			4.98 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:12	CH	EET MID

Client Sample ID: SS24

Lab Sample ID: 890-6078-7
Matrix: Solid
Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 14:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 14:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 11:51	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 11:51	WP	EET DAL

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS24

Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:32	CH	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Laboratory: Eurofins Dallas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704295-23-34	06-30-24

Laboratory: Eurofins Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

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 DAL
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET DAL
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Sample Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6078-1	SS18	Solid	01/31/24 10:45	01/31/24 11:49	0.25'
890-6078-2	SS19	Solid	01/31/24 10:50	01/31/24 11:49	0.25'
890-6078-3	SS20	Solid	01/31/24 10:55	01/31/24 11:49	0.25'
890-6078-4	SS21	Solid	01/31/24 11:00	01/31/24 11:49	0.25'
890-6078-5	SS22	Solid	01/31/24 11:05	01/31/24 11:49	0.25'
890-6078-6	SS23	Solid	01/31/24 11:10	01/31/24 11:49	0.25'
890-6078-7	SS24	Solid	01/31/24 11:15	01/31/24 11:49	0.25'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: 6078

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	601 N. Marienfeld St. #400	Address:	
City, State ZIP:	Midland, TX 79701	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	Cabo Wabo Federal Com 801H	Turn Around	☑ Routine ☐ Rush
Project Number:	030C024167	Due Date:	
Project Location:	32.1722, -103.9325	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	tpraven
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.0
Total Containers:		Corrected Temperature:	1.8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH	BTEX	Chlorides
SS18	Soil	1-31-24	1045	0.25	Comp	1		X	X	X
SS19			1050							
SS20			1055							
SS21			1100							
SS22			1105							
SS23			1110							
SS24			1115							

Preservative Codes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten		11:49 1/31	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Phone: 432-704-5440

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 880-9114.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-6078-1
Address: 9701 Harry Hines Blvd, ,	Due Date Requested: 2/6/2024			
City: Dallas	TAT Requested (days):			
State, Zip: TX, 75220				
Phone: 214-902-0300(Tel)	PO #:			
Email:	WO #:			
Project Name: Cabo Wabo Federal Com 801H	Project #: 89000145			
Site:	SSOW#:			

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_Calc	8015MOD_NM/8015NM_S_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SS18 (890-6078-1)	1/31/24	10:45 Mountain		Solid			X	X	1	
SS19 (890-6078-2)	1/31/24	10:50 Mountain		Solid			X	X	1	
SS20 (890-6078-3)	1/31/24	10:55 Mountain		Solid			X	X	1	
SS21 (890-6078-4)	1/31/24	11:00 Mountain		Solid			X	X	1	
SS22 (890-6078-5)	1/31/24	11:05 Mountain		Solid			X	X	1	
SS23 (890-6078-6)	1/31/24	11:10 Mountain		Solid			X	X	1	
SS24 (890-6078-7)	1/31/24	11:15 Mountain		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: AJ via FedEx	Date/Time:	Company	Received by: FedEx	Date/Time:	Company
Relinquished by: via FedEx	Date/Time: 2/6/24 957	Company	Received by: MS	Date/Time: 2/6/24 957	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: THM001 1.6 -4

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6078-1
SDG Number: 03D2024167

Login Number: 6078
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6078-1
SDG Number: 03D2024167

Login Number: 6078
List Number: 3
Creator: Sharp, Michael

List Source: Eurofins Dallas
List Creation: 02/06/24 10:39 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6078-1
SDG Number: 03D2024167

Login Number: 6078
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/01/24 11:02 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/5/2024 12:45:14 PM

JOB DESCRIPTION

Cabo Wabo Federl Com 801H
Eddy County

JOB NUMBER

880-40020-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

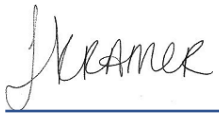
Eurofins Midland

Job Notes

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

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

Authorization



Generated
3/5/2024 12:45:14 PM

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

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Laboratory Job ID: 880-40020-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-40020-1
Project/Site: Cabo Wabo Federl Com 801H SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum Job ID: 880-40020-1
Project: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1 Eurofins Midland

Job Narrative
880-40020-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 2/27/2024 4:47 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C.

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SW01 (880-40020-1).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-74453 recovered under the lower control limit for Benzene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-74452 and analytical batch 880-74453 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 8021B: Surrogate recovery for the following sample was outside control limits: SW01 (880-40020-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The method blank for preparation batch 880-74452 and 880-74472 and analytical batch 880-74453 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

GC Semi VOA
Method TX_1005: The surrogate recovery for the blank associated with preparation batch 880-74530 and analytical batch 880-74564 was outside the upper control limits.

Method TX_1005: The method blank for preparation batch 880-74530 and analytical batch 880-74564 contained C6-C12 Range Hydrocarbons above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method TX_1005: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-74530 and analytical batch 880-74564 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.

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-74240 and analytical batch 880-74484 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

Case Narrative

Client: Ensolum Job ID: 880-40020-1
Project: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1 (Continued) Eurofins Midland

within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Client Sample ID: SW01

Date Collected: 02/27/24 12:00
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

Lab Sample ID: 880-40020-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.000709**	**J B**	0.00200	0.000386	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		03/01/24 08:42	03/03/24 04:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*03/01/24 08:42*	*03/03/24 04:06*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*03/01/24 08:42*	*03/03/24 04:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	0.00101	mg/Kg			03/03/24 04:06	1

Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	**35.1**	**J B**	50.5	15.2	mg/Kg		03/03/24 00:37	03/04/24 14:50	1
>C12-C28 Range Hydrocarbons	**26.5**		50.5	15.2	mg/Kg		03/03/24 00:37	03/04/24 14:50	1
>C28-C35 Range Hydrocarbons	<50.5	U	50.5	15.2	mg/Kg		03/03/24 00:37	03/04/24 14:50	1
Total Petroleum Hydrocarbons (C6-C35)	**61.6**		50.5	15.2	mg/Kg			03/04/24 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*101*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:50*	*1*
o-Terphenyl (Surr)	*104*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**353**		5.03	0.397	mg/Kg			03/03/24 16:47	1

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

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)										
880-40020-1	SW01	82	67 S1-										
LCS 880-74452/1-A	Lab Control Sample	124	102										
LCSD 880-74452/2-A	Lab Control Sample Dup	111	117										
MB 880-74452/5-A	Method Blank	73	91										
MB 880-74472/5-A	Method Blank	78	84										

Surrogate Legend

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

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO	OTPH										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-40020-1	SW01	101	104										
LCS 880-74530/2-A	Lab Control Sample	102	110										
LCSD 880-74530/3-A	Lab Control Sample Dup	101	113										
MB 880-74530/1-A	Method Blank	123	142 S1+										

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-74452/5-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74452

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0007257	J	0.00200	0.000385	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 08:42	03/02/24 20:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*03/01/24 08:42*	*03/02/24 20:50*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*03/01/24 08:42*	*03/02/24 20:50*	*1*

Lab Sample ID: LCS 880-74452/1-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09161		mg/Kg		92	70 - 130
Toluene	0.100	0.09911		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1253		mg/Kg		125	70 - 130
m-Xylene & p-Xylene	0.200	0.2501		mg/Kg		125	70 - 130
o-Xylene	0.100	0.1258		mg/Kg		126	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-74452/2-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74452

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08061		mg/Kg		81	70 - 130	13	35
Toluene	0.100	0.1001		mg/Kg		100	70 - 130	1	35
Ethylbenzene	0.100	0.1084		mg/Kg		108	70 - 130	14	35
m-Xylene & p-Xylene	0.200	0.2175		mg/Kg		109	70 - 130	14	35
o-Xylene	0.100	0.1087		mg/Kg		109	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: MB 880-74472/5-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74472

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0007213	J	0.00200	0.000385	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		03/01/24 11:44	03/02/24 09:39	1

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

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

Lab Sample ID: MB 880-74472/5-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74472

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 11:44	03/02/24 09:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*03/01/24 11:44*	*03/02/24 09:39*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*03/01/24 11:44*	*03/02/24 09:39*	*1*

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Lab Sample ID: MB 880-74530/1-A
Matrix: Solid
Analysis Batch: 74564

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74530

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	23.62	J	50.0	15.0	mg/Kg		03/03/24 00:37	03/04/24 09:03	1
>C12-C28 Range Hydrocarbons	<50.0	U	50.0	15.0	mg/Kg		03/03/24 00:37	03/04/24 09:03	1
>C28-C35 Range Hydrocarbons	<50.0	U	50.0	15.0	mg/Kg		03/03/24 00:37	03/04/24 09:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*123*		*70 - 130*	*03/03/24 00:37*	*03/04/24 09:03*	*1*
o-Terphenyl (Surr)	*142*	*S1+*	*70 - 130*	*03/03/24 00:37*	*03/04/24 09:03*	*1*

Lab Sample ID: LCS 880-74530/2-A
Matrix: Solid
Analysis Batch: 74564

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74530

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C6-C12 Range Hydrocarbons			1000	1011		mg/Kg		101	75 - 125		
>C12-C28 Range Hydrocarbons			1000	935.4		mg/Kg		94	75 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*102*		*70 - 130*
o-Terphenyl (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-74530/3-A
Matrix: Solid
Analysis Batch: 74564

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74530

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6-C12 Range Hydrocarbons			1000	1037		mg/Kg		104	75 - 125	3	25
>C12-C28 Range Hydrocarbons			1000	992.8		mg/Kg		99	75 - 125	6	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*101*		*70 - 130*
o-Terphenyl (Surr)	*113*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-74240/1-A
Matrix: Solid
Analysis Batch: 74484

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.395	mg/Kg			03/03/24 12:20	1

Lab Sample ID: LCS 880-74240/2-A
Matrix: Solid
Analysis Batch: 74484

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.9		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-74240/3-A
Matrix: Solid
Analysis Batch: 74484

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	252.5		mg/Kg		101	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

GC VOA

Prep Batch: 74452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	5035	
MB 880-74452/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-74452/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-74452/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 74453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	8021B	74452
MB 880-74452/5-A	Method Blank	Total/NA	Solid	8021B	74452
MB 880-74472/5-A	Method Blank	Total/NA	Solid	8021B	74472
LCS 880-74452/1-A	Lab Control Sample	Total/NA	Solid	8021B	74452
LCSD 880-74452/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	74452

Prep Batch: 74472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-74472/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 74726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 74530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	TX_1005_S_Prep	
MB 880-74530/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Prep	
LCS 880-74530/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Prep	
LCSD 880-74530/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Prep	

Analysis Batch: 74564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	TX 1005	74530
MB 880-74530/1-A	Method Blank	Total/NA	Solid	TX 1005	74530
LCS 880-74530/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	74530
LCSD 880-74530/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	74530

Analysis Batch: 74800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	TX 1005	

HPLC/IC

Leach Batch: 74240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Soluble	Solid	DI Leach	
MB 880-74240/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-74240/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-74240/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

HPLC/IC

Analysis Batch: 74484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Soluble	Solid	300.0	74240
MB 880-74240/1-A	Method Blank	Soluble	Solid	300.0	74240
LCS 880-74240/2-A	Lab Control Sample	Soluble	Solid	300.0	74240
LCSD 880-74240/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	74240

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Client Sample ID: SW01

Date Collected: 02/27/24 12:00
Date Received: 02/27/24 16:47

Lab Sample ID: 880-40020-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			74452	EL	EET MID	03/01/24 08:42
Total/NA	Analysis	8021B		1	74453	MNR	EET MID	03/03/24 04:06
Total/NA	Analysis	Total BTEX		1	74726	SM	EET MID	03/03/24 04:06
Total/NA	Prep	TX_1005_S_Prep			74530	TKC	EET MID	03/03/24 00:37
Total/NA	Analysis	TX 1005		1	74564	SM	EET MID	03/04/24 14:50
Total/NA	Analysis	TX 1005		1	74800	SM	EET MID	03/04/24 14:50
Soluble	Leach	DI Leach			74240	SMC	EET MID	02/28/24 10:03
Soluble	Analysis	300.0		1	74484	CH	EET MID	03/03/24 16:47

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Laboratory: Eurofins Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
TX 1005	Texas - Total Petroleum Hydrocarbon (GC)	TCEQ	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
TX_1005_S_Prep	Extraction - Texas Total petroleum Hyrdocarbons	TCEQ	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

TCEQ = Texas Commission of Environmental Quality

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-40020-1	SW01	Solid	02/27/24 12:00	02/27/24 16:47	0-0.5'

eurofins | Environment Testing Xenco

Chain of Custody

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

880-40020 Chain of Custody

Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum, LLC	Company Name:	
Address:	601 N Marienfeld St Ste 400	Address:	
City, State ZIP:	Midland, TX 79701	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	Cabo Wabo Federal Com 801H	Turn Around	
Project Number:	03D2024167	☑ Routine ☐ Rush	
Project Location:	Eddy County	Due Date:	
Sampler's Name:	Tabitha Guardian	TAT starts the day received by the lab, if received by 4:30pm	
PO #	03D2024167		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR8
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-1.0
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	0.6
Total Containers:		Corrected Temperature:	0.5

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX 8021B	Chlorides 300	TPH 1005
SW01	S	2/27/24	1200	0-0.5'	C	1		X	X	X

NFE

2/29/24

TNG

Preservative Codes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		02-27-24	2		
3		16:47	4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-40020-1
SDG Number: Eddy County

Login Number: 40020
List Number: 1
Creator: Wheeler, Jazmine

List Source: Eurofins Midland

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

ENSOLUM

APPENDIX D

Closure Request, July 11, 2023

ENSOLUM

July 3, 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
Cabo Wabo Federal Com 801H
Incident Number NAPP2304550164
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Cabo Wabo Federal Com 801H (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to assess for the presence or absence of impacts to soil following a produced water release at the Site. Based on excavation activities and laboratory analytical results from the soil sampling events, COG is submitting this *Closure Request,* describing remediation that has occurred and requesting closure for Incident Number NAPP2304550164.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 24, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.1222°, -103.9325°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On January 28, 2023, a temporary tank malfunctioned and released 9.0594 barrels (bbls) of produced water within the secondary containment and onto the well pad. A vacuum truck was dispatched to the site and recovered 9.0 bbls of freestanding fluids from within the containment. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on February 14, 2023. The release was assigned Incident Number NAPP2304550164.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the 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 greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is the New Mexico Office of the State Engineer (NMOSE) well C-04529, located approximately 0.8 miles north of the Site. The soil boring was drilled during May 2021 to a depth of 101 feet bgs and no groundwater was encountered. Four additional soil borings were drilled in all directions around the Site between February 2020 and November 2022. The soil borings were located between

0.9 miles and 1.7-miles from the Site and were drilled to depths ranging from 105 feet to 120 feet bgs. No groundwater was encountered in any of the soil borings. Based on the soil boring data, regional depth to groundwater in the area is confirmed to be greater than 100 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The associated well records are included in Appendix A.

The closest significant watercourse to the Site is an intermittent stream, located approximately 1,794 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (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
- Total Petroleum Hydrocarbons (TPH): 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On March 13, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Assessment soil samples SS01 through SS13 were collected within and around the release extent at a depth of 0.25 feet bgs, to assess for the presence or absence of impacted soil resulting from the release and confirm the lateral extent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

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

Laboratory analytical results for assessment soil sample SS02 indicated TPH concentrations exceeded the Site Closure Criteria. Laboratory analytical results for assessment samples SS01 and SS03 through SS13 indicated all COC concentrations were compliant with the Site Closure Criteria.

On May 12, 2023, Ensolum personnel returned to the Site to oversee additional delineation activities. Nine boreholes were advanced via hand-auger to a depth of 1-foot bgs within the release extent at the location of assessment samples SS05 through SS13. One soil sample was collected from each borehole at a depth of 1-foot bgs (SS05A through SS13A). Soil from the boreholes was field screened for VOCs and chloride. Field screening results and observations for the boreholes were documented on

lithologic/soil sampling logs, which are included in Appendix C. The soil samples were collected, handled, and analyzed following the same procedures as described above. The delineation soil sample locations are depicted on Figure 2.

Laboratory analytical results for borehole delineation soil samples SS05A through SS13A indicated all COC concentrations were compliant with the Site Closure Criteria and provided vertical delineation of the release to the most stringent Table I Closure Criteria. Based on laboratory analytical results for assessment sample SS02, excavation activities were warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 12, 2023, in coordination with delineation activities, Ensolum personnel were onsite to oversee excavation activities based on laboratory analytical results for assessment sample SS02. Excavation activities were performed using a backhoe and transport vehicles. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed at a depth of 0.5 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Due to the shallow depth of the excavation, the sidewalls were incorporated into the floor samples. Composite soil samples FS01 and FS02 were collected from the floor of the excavation at a depth of 0.5 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3. Four additional assessment soil samples (SS14 through SS17) were collected around the release extent in each cardinal direction at a depth of approximately 0.5 feet bgs to confirm the lateral extent of the release. The assessment soil sample locations are presented on Figure 2.

Laboratory analytical results for the excavation floor samples indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for assessment soil samples SS14 through SS17, collected around the release extent, were compliant with most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation measured approximately 350 square feet in areal extent. A total of approximately 10 cubic yards of impacted soil was excavated, transported, and properly disposed at R360 Environmental Solutions in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was backfilled.

CLOSURE REQUEST

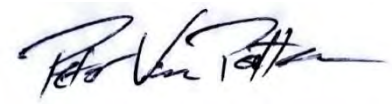
Site assessment and excavation activities were conducted at the Site to address the impacted soil resulting from the January 28, 2023, produced water release. Laboratory analytical results for the delineation and excavation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. In addition, the release was laterally and vertically delineated to the most stringent Table I Closure Criteria by assessment soil samples SS01, SS03, SS14 through SS17 and SS05A through SS13A.

Initial response efforts and excavation of impacted soil have mitigated impacts at this site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. As such, COG respectfully requests closure for Incident Number

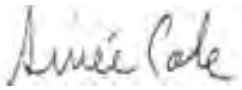
NAPP2304550164. NMOCD Notifications are included in Appendix E and the Final C-141 is included in Appendix F.

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

Sincerely,
Ensolum, LLC



Peter Van Patten
Project Geologist



Aimee Cole
Senior Managing Scientist

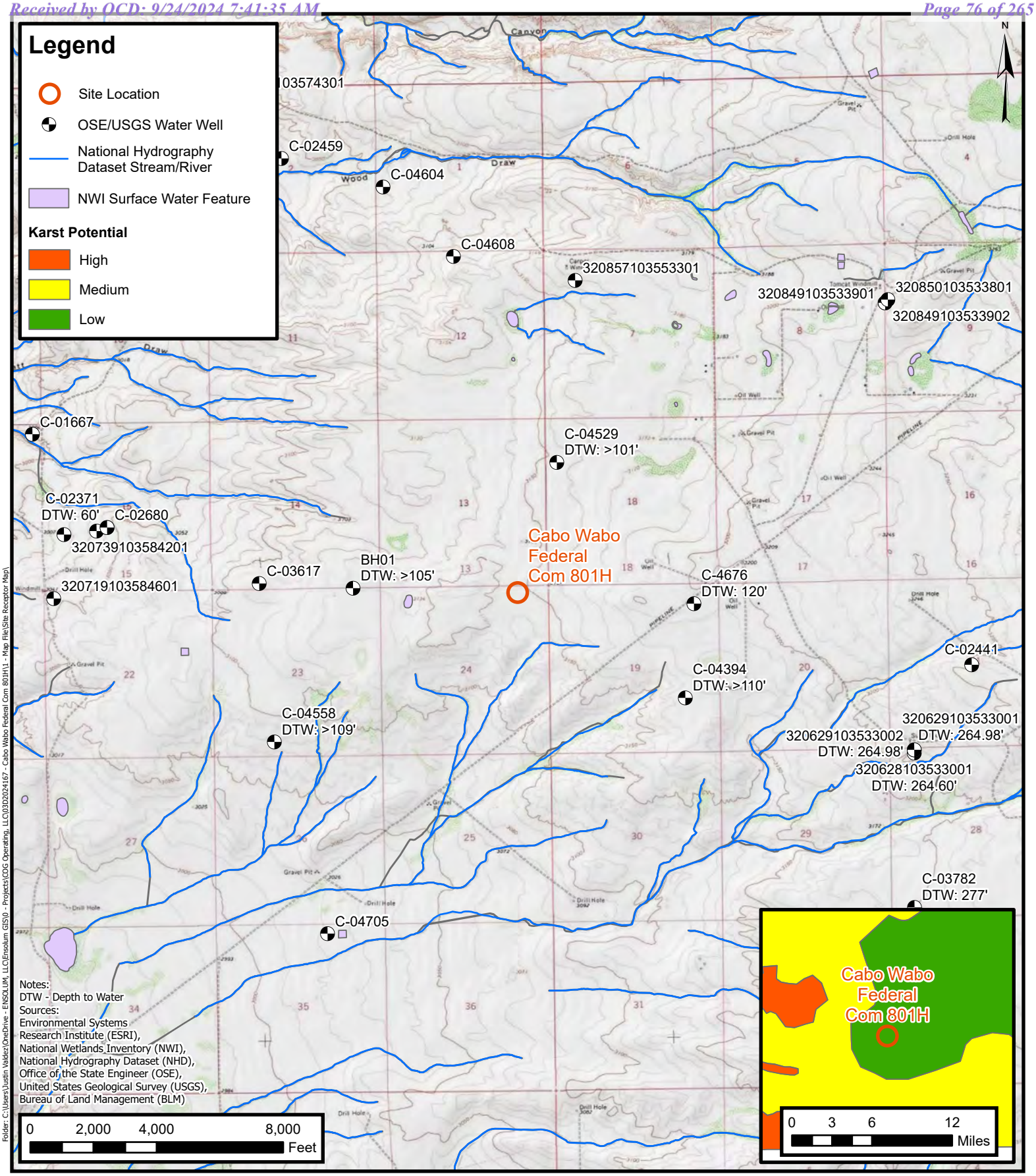
cc: Justin Carlile, COG Operating, LLC
Bureau of Land Management

Appendices:

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

ENSOLUM

FIGURES



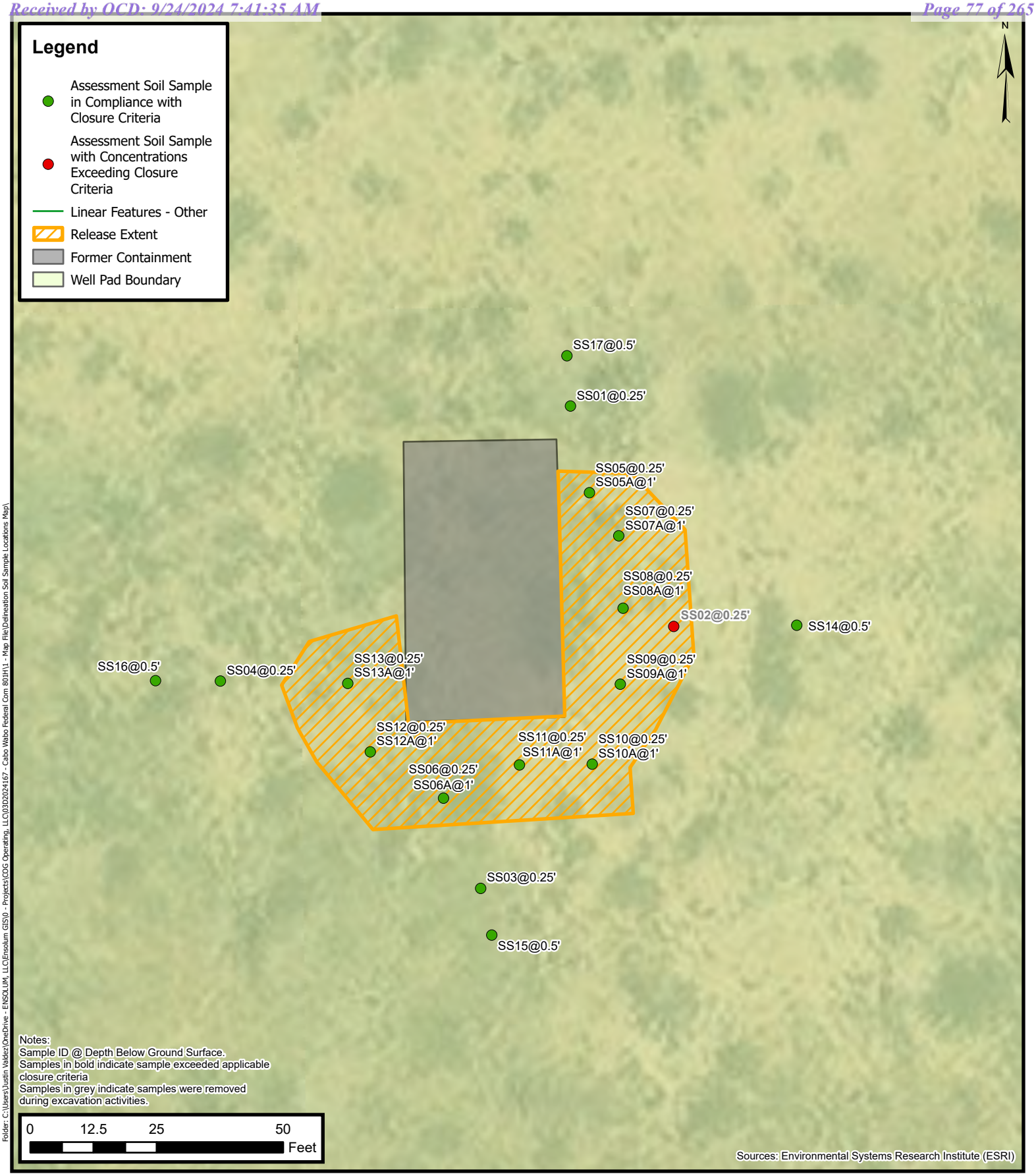
Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024167 - Cabo Wabo Federal Com 801H\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number: NAPP2304550164
Unit A, Sec 24, T25S, R29E
Eddy County, New Mexico

FIGURE 1



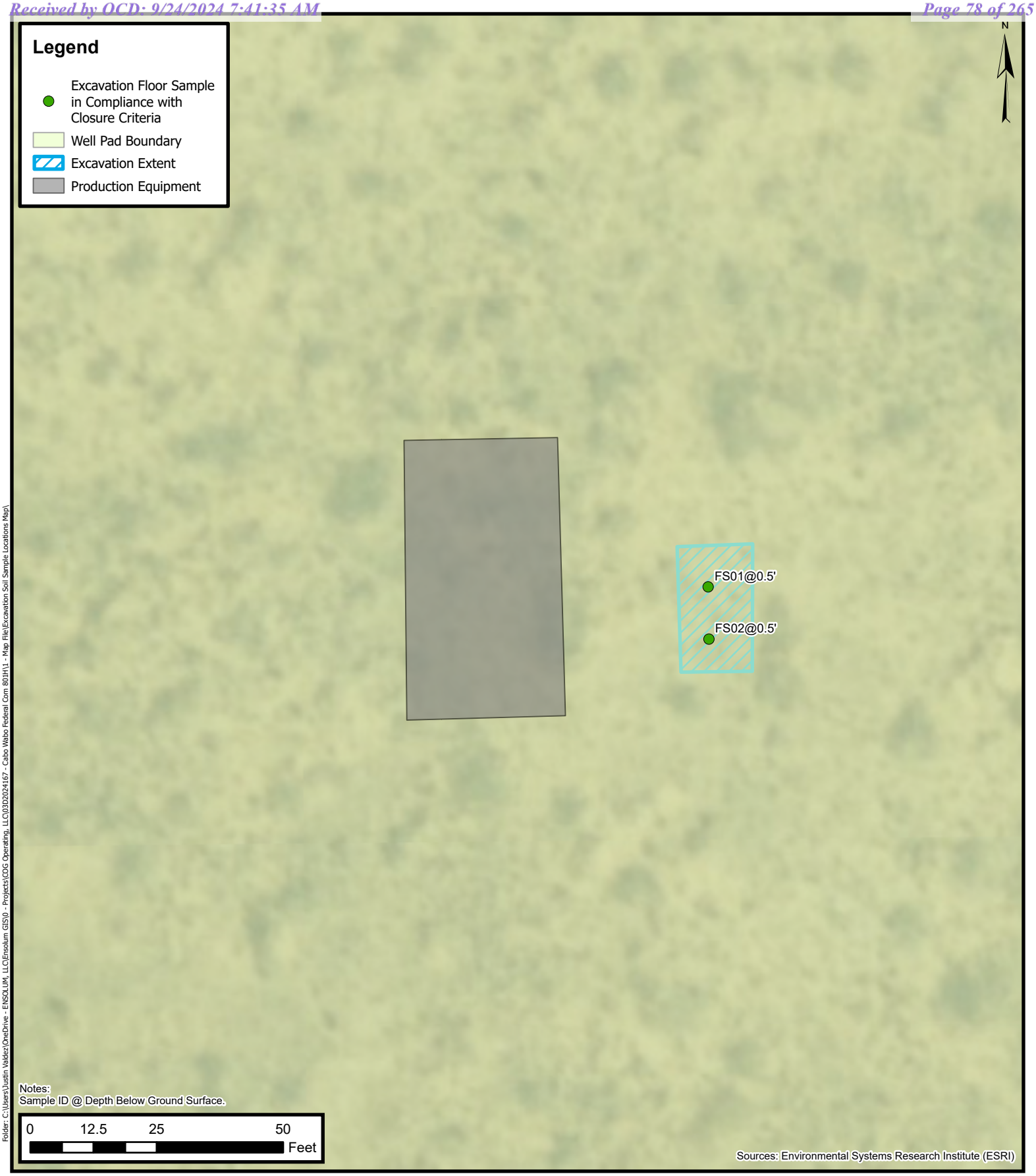
Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024167 - Cabo Wabo Federal Com 801H\1 - Map File\Delineation Soil Sample Locations Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Assessment Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number: NAPP2304550164
Unit A, Sec 24, T25S, R29E
Eddy County, New Mexico

FIGURE 2



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024167 - Cabo Wabo Federal Com 801H\1 - Map File\Excavation Soil Sample Locations Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal Com 801H
Incident Number: NAPP2304550164
Unit A, Sec 24, T25S, R29E
Eddy County, New Mexico

FIGURE 3

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Cabo Wabo Federal Com 801H
COG Operating, LLC
Eddy County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Assessment Soil Samples										
SS01	03/13/2023	0.25	<0.00201	<0.00402	<49.9	139	<49.9	139	139	109
SS02	03/13/2023	0.25	<0.00202	<0.00403	<50.0	2640	<50.0	2,640	**2,640**	429
SS03	03/13/2023	0.25	<0.00199	<0.00398	<49.9	71.4	<49.9	71.4	71.4	451
SS04	03/13/2023	0.25	<0.00200	<0.00399	<49.9	987	<49.9	987	987	503
SS05	03/13/2023	0.25	<0.00200	<0.00401	<49.9	427	<49.9	427	427	8,870
SS05A	05/12/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	216
SS06	03/13/2023	0.25	<0.00199	<0.00398	<50.0	430	<50.0	430	430	3,590
SS06A	05/12/2023	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	229
SS07	03/13/2023	0.25	<0.00199	<0.00398	<50.0	965	<50.0	965	965	1,960
SS07A	05/12/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	226
SS08	03/13/2023	0.25	<0.00200	<0.00399	<49.9	169	<49.9	169	169	8,150
SS08A	05/12/2023	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	236
SS09	03/13/2023	0.25	<0.00201	<0.00402	<49.9	678	<49.9	678	678	1,500
SS09A	05/12/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	317
SS10	03/13/2023	0.25	<0.00200	<0.00401	<49.9	88.5	<49.9	88.5	88.5	335
SS10A	05/12/2023	1	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	310
SS11	03/13/2023	0.25	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	1,100
SS11A	05/12/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	313
SS12	03/13/2023	0.25	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	587
SS12A	05/12/2023	1	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	332
SS13	03/13/2023	0.25	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	4,270
SS13A	05/12/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	335
SS14	05/12/2023	0.5	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	326
SS15	05/12/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	353
SS16	05/12/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	285
SS17	05/12/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	293
Excavation Soil Samples										
FS01	05/12/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	386
FS02	05/12/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	472

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
*Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.*
Grey text represents samples that have been excavated

ENSOLUM

APPENDIX A

Referenced Well Records

DTW Investigation

Cabo Wabo Federal Com 801H
Incident Number NAPP2304550164

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (MW-1)	n/a	C-4529

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	8'	2.07"	N
	LONGITUDE	103°	55'	42.27"	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE
NW NW Sec. 18 T25S R30E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
05/14/2021	05/14/2021	temporary well material	101	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	101	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4529	POD NO. 1	TRN NO. 692934	
LOCATION Exp1 25S.30E.18.131		WELL TAG ID NO. —	PAGE 1 OF 2

OSE DTT JUN 10 2021 PM 2:45

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	SAND, poorly graded, fine-very grained, caliche gravel, Reddish-brown, dry	Y ✓ N	
4	29	25	CALICHE, poorly consolidated, with sand medium grained, tan-off white, dry	Y ✓ N	
29	39	10	SAND, poorly graded, fine-very grained, some caliche gravel, Tan-brown, dry	Y ✓ N	
39	54	15	SILTY SAND, poorly graded, very- fine grained, Light brown, dry	Y ✓ N	
54	59	5	SILTY SAND, poorly graded, very- fine grained, caliche gravel Light brown, dr	Y ✓ N	
59	73	14	SANDY CLAY, very-fine grained sand, low plasticity, Brown- Red Brown, moi	Y ✓ N	
73	79	6	CLAYEY SAND, low plasticity, very-fine grained sand, Brown/Red Brown, mo	Y ✓ N	
79	83	4	SANDY CLAY, very-fine grained sand, low plasticity, Brown- Dark Brown, mo	Y ✓ N	
83	94	9	SANDY CLAY, very-fine grained sand, low plasticity, Reddish Brown, moist	Y ✓ N	
94	99	5	SANDY CLAY, very-fine grained sand, low plasticity, Brown-Dark Brown, dry	Y ✓ N	
99	101	2	SANDY CLAY, very-fine grained sand, low plasticity, Earth Brown, dry	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 06/09/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4525	POD NO. 1	TRN NO. 692934
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

OSE DIT JUN 10 2021 PM 2:45

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DII AUG 17 2021 PM 0:21

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4558

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	6	33.90	N
	LONGITUDE	103	57	27.03	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

SE SW Sec. 23 T25S R29E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
07/21/2021	07/21/2021	temporary well material	109	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	109	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4558	POD NO. 1	TRN NO. 699798	
LOCATION 25S-29E-23 343		WELL TAG ID NO.	PAGE 1 OF 2

OSE DOT AUG 17 2021 PM3:21

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	5	5	Calichem moderate consolidation, Off White	Y ✓ N	
5	23	18	Sand, poorly graded, some silt, Light Brown	Y ✓ N	
23	39	16	Sand, Fine-medium grain, poorly graded, some gravel, Light Brown	Y ✓ N	
39	44	5	Sand, Fine-medium grain, poorly graded, some gravel and clay, Light Brown	Y ✓ N	
44	65	21	Sand, Fine-medium grain, poorly graded, Light Brown	Y ✓ N	
65	70	5	Clay Sand, poorly graded, Light Brown, moist	Y ✓ N	
70	108	28	Sand, Fine-medium grain, poorly graded, Light Brown	Y ✓ N	
108	109	1	Sandstone, poorly sorted, interbedded with clay , moist	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 08/16/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4558	POD NO. 1	TRN NO. 699798	
LOCATION 25S-29E-23 343		WELL TAG ID NO.	PAGE 2 OF 2

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	2RP-3790
Logged By: FS	**Method:** SONIC
Lat/Long:	**Field Screening:** ~~CHLORIDES, PID~~
Hole Diameter: 4"/6"	**Total Depth:** 110'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: No sampling, lithology remarks only

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					1			hydrovac excavated (refusal @ 1')
					2			2.5' SAND, dry, well graded, coarse-fine grand, light brwn-tan, no stain, no odor
D			N		3		SW-S	
					4			5' few silty sand pockets, reddish brwn, no plas, non cohesive
D			N		5			
					6			
					7		SP	6' SAND, dry, poorly graded, light brwn-brwn, fine-very fine 2.5-4 9-12
D			N		8			
					9			7.5' some mod consol ss light brwn-brwn, sub rounded
D			N		10		SW-S	
					11			10' abundant ss 10-11' color change
					12			12' ss gravel? absent tan-off white
					13		SP	16' abundant ss gravel (mod consol) 13' back to light brwn-brwn
					14			19' abundant - some
D			N		15			21.5' sandstone, light, abundant well
					16			brwn-tan, dry, mod consolidated
D			N		17		SW-S	
					18			23' sandstone chunks absent
D			N		19			
					20			
					21			
D			N		22			
					23			
					24			
D			N		25			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	~~2RP-2674~~ 2RP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS / Method: SONIC
Lat/Long:	Field Screening: ~~CHLORIDES, PID~~ / Hole Diameter: 4"/6" / Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					26			27.5' SAND, dry, light brwn - tan, poorly graded, fine-very fine grey - grey
D			N		27			
					28		SP	30' trace light ~~brwn - tan~~ caliche pebbles (gravel), rounded
D			N		29			
					30			31' caliche pebbles absent
					31			
D			N		32			31.5' color change light brwn - reddish brwn
					33			
M			N		34			33-34' abundant ss chunks, mod consol
					35			35' ss chunks absent
					36			
M			N		37		SW-S	36' some clay pockets, reddish brwn, few pebbles, rounded - subrounded, grey - light grey, few laminations w/ clay, caliche, dolomite?
					38			
					39			
M			N		40			
					41			
M			N		42			42.5' clay laminations, trace, reddish brwn
					43			
					44			44' color change, light brwn - tan, SILTY sand
M			N		45		SP-SM	44.5' some SILTY sand predomin, light brwn - tan, no plasticity, non cohesive, trace high plas clay nodules, reddish brwn
					46			
D			N		47			
					48			48.5' low plas clay band, orange (35-40 mm)
					49			49.5' faint yellow band, (15-20 mm)
D			N		50			

rig adding water

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	ZRP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS / Method: sonic
Lat/Long: / Field Screening: ~~CHLORIDES, PID~~	Hole Diameter: 4"/6" / Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		51		SP	51.5' trace, high plas clay nodules
					52			
D			N		53			53-54' some silty ss, poorly consolidated
					54			
M			N		55			55.5' color change tan-grey band (30mm)
					56			
M			N		57	X		59.5' SILTY sand, light brwn-brwn, moist, no plas, non cohesive, no stain
					58			
M			N		59			
					60		SM	62' more consolidated
					61			64' dark brwn color change, silty clay nodules
					62			
D			N		63		SM-S	66' pockets of silty clay brwn-green
M			N		64			
					65			68' low plas clay pockets some, few low plas clay laminations
M			N		66			
					67			
M			N		68			71' SILTY sand, dry, no plas, non cohesive, light brwn-tan
					69			
M			N		70			74' trace caliche pebbles, light grey-grey
					71			
D			N		72		SM	
					73			
					74			
D			N		75			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	2RP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS, BB / Method: sonic
Lat/Long: / Field Screening: ~~CHLORIDES, PID~~	Hole Diameter: 6"/4" / Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
						76	SM	76.5' trace low plas clay nodules, reddish brwn
D			N			77		
						78		82' CLAYSTONE, moist, brwn-greenish grey, low plasticity, cohesive, no stain, no odor mod consolidated
D			N			79		
						80		
D			N			81		85' SILTY sand, dry, light brwn - brwn, no plas, non cohesive, no stain, no odor
						82	CL-S	
M			N			83		
						84		87' color change tan - off white
D			N			85	SM	
						86		88' light brwn - brwn
D			N			87	SM-S	
						88		87' SILTSTONE, dry, w/ clay pockets, low plas
D			N			89		
						90		91' abundant clay pockets
D			N			91		
						92		94.5' band yellow low plas clay
D			N			93		
						94	SM	
D			N			95	CH	end@95' 2/4/2020
M			N			96		2/5/20
M			N			97		95'-101 CLAY, moist, brown - dark brown, high plasticity, cohesive, some tan clay laminations, no stain, no odor.
D			N			98		
M			N			99		98' - 99' tan fine grain sandstone stringer.
						100		

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW0 C 4394	2/5/2020
Project Name:	**RP Number:**
PLU 423	2RP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BP / Method: Sonic
Lat/Long: / Field Screening: CHLORIDES, PID.	Hole Diameter: 6"/4" / Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		101		CH / SP-S	101'- 105' SANDSTONE, tan - light brown, dry, moderately consolidated, calcareous cemented, poorly graded, no stain, no odor.
D			N		102			
D			N		103			
M			N		104			
D			N		105		CH	105'- 110' CLAY, moist, dark brown - brown, high plasticity, cohesive, trace tan sand laminations, no stain, no odor.
D			N		106			
D			N		107			
M			N		108			107'- 109' tan - light brown well consolidated fine grain sandstone stringer.
					109			
					110		TD @ 110'	TD @ 110'
					111			
					112			
					113			
					114			
					115			
					116			
					117			
					118			
					119			
					120			
					121			
					122			
					123			
					124			
					125			

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DII DEC 21 2022 PM3:14

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
C-04676 POD 1		C-04676

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO ENERGY INC	575-200-0729

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
3104 E GREENE ST	CARLSBAD	NM	88220

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	12	32.66	N
	LONGITUDE	-103	54	50.95	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

POKER LAKE UNIT # 231

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1184	RUSSELL SOUTHERLAND	WEST TEXAS WATER WELL SERVICE

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
11/22/22	11/22/22	120		

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
			NO CASING IN HOLE				

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			N/A		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO. C-04676	POD NO. 1	TRN NO. 736286	
LOCATION 24S.30E.19.1.2.2		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1		CALICHIE PAD	Y ✔ N	
1	120		RED SAND	Y ✔ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☑ OTHER – SPECIFY: DRY HOLE

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

OSE DII DEC 21 2022 PM3:14

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

RUSSELL SOUTHERLAND

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

RUSSELL SOUTHERLAND — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

11/22/2022 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO. C-04676	POD NO. 1	TRN NO. 736286	
LOCATION 24S.30E.19.1.2.2.		WELL TAG ID NO.	PAGE 2 OF 2

Environmental & Safety Solutions, Inc.

Soil Boring/Temporary Monitor Well BH-1

Company: COG Operating, LLC	**Well/Borehole ID:** BH-1	**Drilling Company:** Scarborough Drilling, Inc.
Site: Patron 23 Federal #004H	**Coordinates (NAD 83):** 32.122593,-103.949262	**Driller:** L. Scarborough
NMOCD Reference #: nRM2034558291	**Drilling Date:** 2/24/2021	**Drilling Method:** Air Rotary
Location: Eddy Co., NM	**Depth of Boring (ft):** 105	**Logged By:** L. Scarborough
PLSS: UL 'A' (NE/NE), Sec. 23, T25S, R29E	**Depth to Groundwater (ft):** >105	**Drafted By:** B. Arguijo
	Plugging Date: 2/27/2021	**Draft Date:** 4/9/2021

Completion: N/A **Casing:** N/A **Screen:** N/A

Comments: N/A

Depth (ft)	Groundwater	Lithology	Material Description	Chloride Field Test	Lab	PID	Well Construction
0			Caliche	-	-	-	Open Hole, No Casing
5			Topsoil	-	-	-	
10				-	-	-	
15			Caliche	-	-	-	
20				-	-	-	
25				-	-	-	
30			Sand	-	-	-	
35				-	-	-	
40				-	-	-	
45			Sand with w/ sandy shale streaks	-	-	-	
50				-	-	-	
55				-	-	-	
60				-	-	-	
65				-	-	-	
70			Sand	-	-	-	
75				-	-	-	
80				-	-	-	
85			Sandy shale	-	-	-	
90				-	-	-	
95				-	-	-	
100				-	-	-	
105				-	-	-	
110			Notes: Lines between material types represent approximate boundaries. Actual transitions may be gradual.				
115							

Disclaimer This bore log is intended for environmental not geotechnical purposes.

TECH Environmental & Safety Solutions, Inc.

Xenco

Sample Log

Date: 1-5-21

Project: Patron 23 Federal #004H

Project Number: 13625 Latitude: 32.122 Longitude: -103.9486

Sample ID	PID/Odor	Chloride Conc.	GPS
NH @ [redacted] 0-6" inches	—	2,440	
NH @ 1'	—	364	
EH @ [redacted] 0"-6" inches	—	412	
EH @ 1'	—	148	
SH @ [redacted] 0"-6" inches	—	948	
SH @ 1'	—	184	
WH @ [redacted] 0"-6" inches	—	572	
WH @ 1'	—	148	
SP1 @ [redacted] 0"-6" inches	Mild ~~Odor~~	>2440	
SP1 @ 1'	~~Mild~~ —	516	
SP2 @ [redacted] 0"-6" inches	Mild	>2,440	
SP2 @ 1'	—	1528-R	Ref.! Hard to dig... ROCK
SP3 @ [redacted] 0"-6" inches	Mild	>2440	
SP3 @ 1'	—	316	
SP4 @ [redacted] 0"-6" inches	Mild	>2440	
SP4 @ 1'	—	364	
SP5 @ [redacted] 0"-6" inches	Mild	>2440	
SP5 @ 2'	—	572-R	Hard digging to get 3'

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

ETECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 2/12/21

Project: Patron 23 Federal #004H

Project Number: 13625 Latitude: 32.122 Longitude: -103.9486

Sample ID	PID/Odor	Chloride Conc.	GPS
F1@1'	none	412	
F2@2'	none	508	
F3@2'	none	>120	
F4@1'	none	456	
F5@1'	none	612	
F6@1'	none	4,176	
F7@1'	none	2,472	
F8@1'	none	2,296	
F9@1'	none	3,988	
F10@1'	none	728	
F11@1'	none	196	
F12@1'	none	368	
F13@1'	none	4,905	
F14@1'	none	2,296	
F15@1'	none	1,420	
WW1	none	168	
NW1	none	4,700	
NW2	none	3,092	
NW3	none	2,270	
NW4	none	1,740	
F6B@1'	none	728	
F7B@1'	none	928	
F8B@1'	none	568	
F9B@1'	none	240	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

ETECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 3-1-21

Project: Patron 23 Fed 4H

Project Number: 13625 Latitude: Longitude:

Sample ID	PID/Odor	Chloride Conc.	GPS
FL 1@1'			
FL 2@1'			
FL 3@1'			
FL 4@1'			
FL 5@1'			
FL 6@1'			
FL 7@1'			
FL 8@1'			
FL 9@1'			
FL 10@1'			
EW1			
EW2			
NW1			
NW2			
NW3			
WW1	-		
WW2	-	5992	
EW3	-	3088	
FL 11@1'	-	1740	
FL 12@1'	-	1628	
FL 13@1'	-	1864	
FL 14@1'	-	1740	
FL 15@1'	-	1864	
EW4		2572	
WW3		1740	
SW1		3064	
SW2		3064	
SW3		2308	
FL 16 @ 1'	-	1988	
FL 17 @ 1'	-	1740	
FL 18 @ 1'	-	1740	
FL 19 @ 1'	-	1860	
FL 20 @ 1'	-	1988	
FL 21 @ 1'	-	1860	
FL 22 @ 1'	-	1860	
FL 23 @ 1'	-	2440	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

ETECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 3/8/21

Project: Patron 23 Fed 4H

Project Number: 13625 Latitude: _____ Longitude: _____

Sample ID	PID/Odor	Chloride Conc.	GPS
FL 24 @ 1'	-	2124	
FL 25 @ 1'	-	2124	
FL 26 @ 1'	-	2276	
FL 27 @ 1'	-	1988	
FL 28 @ 1'	-	1988	
FL 29 @ 1'	-	1988	
FL 30 @ 1'	-	1632	
FL 31 @ 1'	-	1582	
FL 32 @ 1'	-	1632	
FL 33 @ 1'	-	1860	
FL 34 @ 1'	-	1988	
FL 35 @ 1'	-	1988	
FL 36 @ 1'	-	1860	
FL 37 @ 1'	-	1988	
FL 38 @ 1'	-	1860	
FL 39 @ 1'	-	1740	
FL 40 @ 1'	-	1740	
FL 41 @ 6"	-	1632	
FL 42 @ 6"	-	1740	
FL 43 @ 6"	-	2124	
FL 44 @ 6"	-	2124	
FL 45 @ 6"	-	2276	
FL 46 @ 6"	-	2440	
FL 47 @ 6"	-	2440	
FL 48 @ 6"	-	2276	
FL 49 @ 6"	-	2276	
FL 50 @ 6"	-	2124	
FL 51 @ 6"	-	1988	
FL 52 @ 6"	-	1988	
FL 53 @ 6"	-	2124	
FL 54 @ 6"	-	2276	
FL 55 @ 6"	-	2276	
FL 56 @ 6"	-	2440	
FL 57 @ 6"	-	2440	
FL 58 @ 6"	-	1988	
FL 59 @ 6"	-	1988	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

GTECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 3/8/21

Project: Patron 23 Fed 4H

Project Number: 13625 Latitude: _____ Longitude: _____

Sample ID	PID/Odor	Chloride Conc.	GPS
FL 60 @ 6"	-	1988	
FL 61 @ 6"	-	1860	
FL 62 @ 6"	-	2124	
FL 63 @ 6"	-	1860	
FL 64 @ 6"	-	1740	
FL 65 @ 6"	-	1860	
FL 66 @ 6"	-	1740	
FL 67 @ 6"	-	1632	
FL 68 @ 6"	-	1740	
FL 69 @ 6"	-	1860	
FL 70 @ 6"	-	1740	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

USGS 320629103533002 25S.30E.21.33342 A

Eddy County, New Mexico
Latitude 32°06'29", Longitude 103°53'30" NAD27
Land-surface elevation 3,209 feet above NAVD88
The depth of the well is 280 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect 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
1949-03-10		D	62610		2939.36	NGVD29	P	Z			A
1949-03-10		D	62611		2941.00	NAVD88	P	Z			A
1949-03-10		D	72019	268.00			P	Z			A
1992-11-06		D	62610		2942.38	NGVD29	P	S			A
1992-11-06		D	62611		2944.02	NAVD88	P	S			A
1992-11-06		D	72019	264.98			P	S			A

ENSOLUM

APPENDIX B

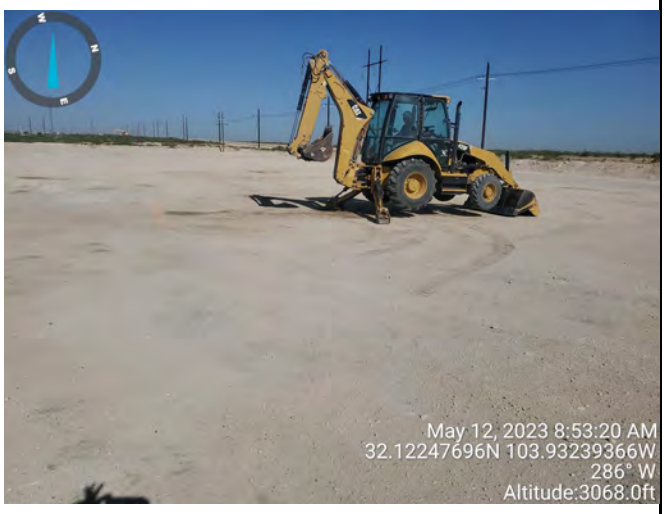
Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
Cabo Wabo Federal Com 801H
NAPP2304550164

Photograph 1 Date: 01/28/2023
Description: Initial Release
View: North

Photograph 2 Date: 03/13/2023
Description: Release Staining
View: West



Photograph 3 Date: 05/12/2023
Description: Excavation Activities
View: West

Photograph 4 Date: 05/12/2023
Description: Completed Excavation
View: West

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: SS05	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122608,-103.932539	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	173	1.6	N	SS05	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	240	0.6	N	SS05A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

	Sample Name: SS06	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122443,-103.932634	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. Non-Detect: <173 ppm (ND)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	ND	1.7	N	SS06	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	280	0.5	N	SS06A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

	Sample Name: SS07	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122584,-103.932520	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	240	1.8	N	SS07	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	240	0.7	N	SS07A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name: SS08	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122545,-103.932518	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	8150	1.0	N	SS08	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	280	0.6	N	SS08A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name: SS09	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122504,-103.932520	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	1500	1.0	N	SS09	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	240	0.6	N	SS09A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

	Sample Name: SS10	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122460,-103.932539	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	335	1.0	N	SS10	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	240	0.5	N	SS10A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

	Sample Name: SS11	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122460,-103.932585	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	1100	1.0	N	SS11	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	280	0.5	N	SS11A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

	Sample Name: SS12	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122460,-103.932585	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	587	1.0	N	SS12	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	280	0.5	N	SS12A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

	Sample Name: SS13	Date: 5/12/2023
	Site Name: Cabo Wabo Federal Com 801H	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024167	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122506,-103.932694	Hole Diameter:	Total Depth: 1.0 foot

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	4270	1.0	N	SS13	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	319	0.5	N	SS13A	1	1	CHHE	SAA (same as above), trace sand/gravel
								TD 1' bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/28/2023 7:59:09 AM

JOB DESCRIPTION

Cabo Wabo Federal Com 801H
SDG NUMBER 03D2024167

JOB NUMBER

890-4322-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

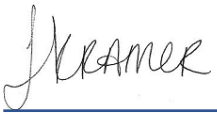
my EOL

Eurofins Carlsbad

Job Notes

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
3/28/2023 7:59:09 AM

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

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Laboratory Job ID: 890-4322-1
SDG: 03D2024167

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4322-1
Project/Site: Cabo Wabo Federal Com 801H SDG: 03D2024167

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Job ID: 890-4322-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4322-1

Receipt
The samples were received on 3/15/2023 2:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4322-1), SS02 (890-4322-2), SS03 (890-4322-3), SS04 (890-4322-4), SS05 (890-4322-5), SS06 (890-4322-6), SS07 (890-4322-7), SS08 (890-4322-8), SS09 (890-4322-9), SS10 (890-4322-10), SS11 (890-4322-11), SS12 (890-4322-12) and SS13 (890-4322-13).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS04 (890-4322-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike duplicate (MSD) recoveries for preparation batch 880-49264 and 880-49264 and analytical batch 880-49491 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.The associated samples are: SS01 (890-4322-1), SS02 (890-4322-2) and SS03 (890-4322-3).

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

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS01

Lab Sample ID: 890-4322-1
Matrix: Solid
Date Collected: 03/13/23 13:25
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 13:49	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 13:49	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 13:49	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/23/23 12:25	03/24/23 13:49	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 13:49	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/23/23 12:25	03/24/23 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*03/23/23 12:25*	*03/24/23 13:49*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/23/23 12:25*	*03/24/23 13:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**139**		49.9		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 21:04	1
Diesel Range Organics (Over C10-C28)	**139**		49.9		mg/Kg		03/20/23 14:02	03/21/23 21:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*03/20/23 14:02*	*03/21/23 21:04*	*1*
o-Terphenyl	*82*		*70 - 130*	*03/20/23 14:02*	*03/21/23 21:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**109**		4.99		mg/Kg			03/25/23 18:11	1

Client Sample ID: SS02

Lab Sample ID: 890-4322-2
Matrix: Solid
Date Collected: 03/13/23 12:30
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/23/23 12:25	03/24/23 14:10	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/23/23 12:25	03/24/23 14:10	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/23/23 12:25	03/24/23 14:10	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/23/23 12:25	03/24/23 14:10	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/23/23 12:25	03/24/23 14:10	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/23/23 12:25	03/24/23 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*03/23/23 12:25*	*03/24/23 14:10*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS02

Date Collected: 03/13/23 12:30
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

Lab Sample ID: 890-4322-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*03/23/23 12:25*	*03/24/23 14:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2640**		50.0		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/21/23 22:11	1
Diesel Range Organics (Over C10-C28)	**2640**		50.0		mg/Kg		03/20/23 14:02	03/21/23 22:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/21/23 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*03/20/23 14:02*	*03/21/23 22:11*	*1*
o-Terphenyl	*103*		*70 - 130*	*03/20/23 14:02*	*03/21/23 22:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**429**		5.03		mg/Kg			03/25/23 18:15	1

Client Sample ID: SS03

Date Collected: 03/13/23 13:05
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

Lab Sample ID: 890-4322-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 14:30	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 14:30	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 14:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 14:30	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 14:30	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*03/23/23 12:25*	*03/24/23 14:30*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/23/23 12:25*	*03/24/23 14:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**71.4**		49.9		mg/Kg			03/22/23 16:11	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS03

Lab Sample ID: 890-4322-3
Matrix: Solid
Date Collected: 03/13/23 13:05
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 22:33	1
Diesel Range Organics (Over C10-C28)	**71.4**		49.9		mg/Kg		03/20/23 14:02	03/21/23 22:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*03/20/23 14:02*	*03/21/23 22:33*	*1*
o-Terphenyl	*84*		*70 - 130*	*03/20/23 14:02*	*03/21/23 22:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**451**		4.97		mg/Kg			03/25/23 18:20	1

Client Sample ID: SS04

Lab Sample ID: 890-4322-4
Matrix: Solid
Date Collected: 03/13/23 12:40
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:01	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/23/23 12:25	03/24/23 16:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:01	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/23/23 12:25	03/24/23 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*03/23/23 12:25*	*03/24/23 16:01*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*03/23/23 12:25*	*03/24/23 16:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/25/23 13:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**987**		49.9		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 22:55	1
Diesel Range Organics (Over C10-C28)	**987**		49.9		mg/Kg		03/20/23 14:02	03/21/23 22:55	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*03/20/23 14:02*	*03/21/23 22:55*	*1*
o-Terphenyl	*95*		*70 - 130*	*03/20/23 14:02*	*03/21/23 22:55*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS04

Lab Sample ID: 890-4322-4
Matrix: Solid
Date Collected: 03/13/23 12:40
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**503**		5.05		mg/Kg			03/25/23 18:24	1

Client Sample ID: SS05

Lab Sample ID: 890-4322-5
Matrix: Solid
Date Collected: 03/13/23 13:00
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/23/23 12:25	03/24/23 16:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 16:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/23/23 12:25	03/24/23 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*03/23/23 12:25*	*03/24/23 16:22*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*03/23/23 12:25*	*03/24/23 16:22*	*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			03/25/23 13:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**427**		49.9		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 23:17	1
Diesel Range Organics (Over C10-C28)	**427**		49.9		mg/Kg		03/20/23 14:02	03/21/23 23:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/21/23 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*03/20/23 14:02*	*03/21/23 23:17*	*1*
o-Terphenyl	*91*		*70 - 130*	*03/20/23 14:02*	*03/21/23 23:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8870**		49.7		mg/Kg			03/25/23 18:38	10

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS06

Lab Sample ID: 890-4322-6
Matrix: Solid
Date Collected: 03/13/23 12:35
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 16:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 16:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 16:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 16:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 16:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*03/23/23 12:25*	*03/24/23 16:42*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*03/23/23 12:25*	*03/24/23 16:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/25/23 13:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**430**		50.0		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/21/23 23:39	1
Diesel Range Organics (Over C10-C28)	**430**		50.0		mg/Kg		03/20/23 14:02	03/21/23 23:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/21/23 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*03/20/23 14:02*	*03/21/23 23:39*	*1*
o-Terphenyl	*98*		*70 - 130*	*03/20/23 14:02*	*03/21/23 23:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3590**		25.1		mg/Kg			03/25/23 18:42	5

Client Sample ID: SS07

Lab Sample ID: 890-4322-7
Matrix: Solid
Date Collected: 03/13/23 12:25
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 17:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 17:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 17:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 17:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 17:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*03/23/23 12:25*	*03/24/23 17:03*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS07

Lab Sample ID: 890-4322-7
Matrix: Solid
Date Collected: 03/13/23 12:25
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*03/23/23 12:25*	*03/24/23 17:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/25/23 13:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**965**		50.0	mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/20/23 14:02	03/22/23 00:00	1
Diesel Range Organics (Over C10-C28)	**965**		50.0	mg/Kg		03/20/23 14:02	03/22/23 00:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/20/23 14:02	03/22/23 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*03/20/23 14:02*	*03/22/23 00:00*	*1*
o-Terphenyl	*85*		*70 - 130*	*03/20/23 14:02*	*03/22/23 00:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1960**		25.0	mg/Kg			03/25/23 18:56	5

Client Sample ID: SS08

Lab Sample ID: 890-4322-8
Matrix: Solid
Date Collected: 03/13/23 13:45
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 17:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 17:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 17:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		03/23/23 12:25	03/24/23 17:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 17:24	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		03/23/23 12:25	03/24/23 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*03/23/23 12:25*	*03/24/23 17:24*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/23/23 12:25*	*03/24/23 17:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**169**		49.9	mg/Kg			03/22/23 16:11	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS08

Lab Sample ID: 890-4322-8
Matrix: Solid
Date Collected: 03/13/23 13:45
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 00:22	1
Diesel Range Organics (Over C10-C28)	**169**		49.9		mg/Kg		03/20/23 14:02	03/22/23 00:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 00:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*03/20/23 14:02*	*03/22/23 00:22*	*1*
o-Terphenyl	*96*		*70 - 130*	*03/20/23 14:02*	*03/22/23 00:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8150**		49.5		mg/Kg			03/25/23 19:01	10

Client Sample ID: SS09

Lab Sample ID: 890-4322-9
Matrix: Solid
Date Collected: 03/13/23 13:50
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 17:45	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 17:45	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 17:45	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/23/23 12:25	03/24/23 17:45	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/23/23 12:25	03/24/23 17:45	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/23/23 12:25	03/24/23 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*03/23/23 12:25*	*03/24/23 17:45*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*03/23/23 12:25*	*03/24/23 17:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**678**		49.9		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 00:44	1
Diesel Range Organics (Over C10-C28)	**678**		49.9		mg/Kg		03/20/23 14:02	03/22/23 00:44	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*03/20/23 14:02*	*03/22/23 00:44*	*1*
o-Terphenyl	*84*		*70 - 130*	*03/20/23 14:02*	*03/22/23 00:44*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS09

Lab Sample ID: 890-4322-9
Matrix: Solid
Date Collected: 03/13/23 13:50
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		25.1		mg/Kg			03/25/23 19:05	5

Client Sample ID: SS10

Lab Sample ID: 890-4322-10
Matrix: Solid
Date Collected: 03/13/23 13:55
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 18:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 18:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 18:05	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/23/23 12:25	03/24/23 18:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 18:05	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/23/23 12:25	03/24/23 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*03/23/23 12:25*	*03/24/23 18:05*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*03/23/23 12:25*	*03/24/23 18:05*	*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			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**88.5**		49.9		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 01:06	1
Diesel Range Organics (Over C10-C28)	**88.5**		49.9		mg/Kg		03/20/23 14:02	03/22/23 01:06	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*03/20/23 14:02*	*03/22/23 01:06*	*1*
o-Terphenyl	*80*		*70 - 130*	*03/20/23 14:02*	*03/22/23 01:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**335**		25.0		mg/Kg			03/25/23 19:10	5

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS11

Lab Sample ID: 890-4322-11
Matrix: Solid
Date Collected: 03/13/23 14:00
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 18:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*03/23/23 12:25*	*03/24/23 18:26*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*03/23/23 12:25*	*03/24/23 18:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 01:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 01:50	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/20/23 14:02	03/22/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*03/20/23 14:02*	*03/22/23 01:50*	*1*
o-Terphenyl	*84*		*70 - 130*	*03/20/23 14:02*	*03/22/23 01:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1100**		4.97		mg/Kg			03/27/23 17:00	1

Client Sample ID: SS12

Lab Sample ID: 890-4322-12
Matrix: Solid
Date Collected: 03/13/23 14:25
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 18:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/23/23 12:25	03/24/23 18:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/23/23 12:25	03/24/23 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*03/23/23 12:25*	*03/24/23 18:47*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS12

Lab Sample ID: 890-4322-12
Matrix: Solid
Date Collected: 03/13/23 14:25
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/23/23 12:25*	*03/24/23 18:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/22/23 16:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/20/23 14:02	03/22/23 02:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/20/23 14:02	03/22/23 02:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/20/23 14:02	03/22/23 02:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*86*		*70 - 130*	*03/20/23 14:02*	*03/22/23 02:13*	*1*
o-Terphenyl	*82*		*70 - 130*	*03/20/23 14:02*	*03/22/23 02:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**587**		4.97	mg/Kg			03/25/23 19:19	1

Client Sample ID: SS13

Lab Sample ID: 890-4322-13
Matrix: Solid
Date Collected: 03/13/23 14:30
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 19:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 19:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 19:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		03/23/23 12:25	03/24/23 19:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/23/23 12:25	03/24/23 19:08	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		03/23/23 12:25	03/24/23 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*03/23/23 12:25*	*03/24/23 19:08*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*03/23/23 12:25*	*03/24/23 19:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			03/25/23 16:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/22/23 16:11	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS13

Lab Sample ID: 890-4322-13
Matrix: Solid
Date Collected: 03/13/23 14:30
Date Received: 03/15/23 14:29
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/22/23 02:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/22/23 02:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/22/23 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*03/20/23 14:02*	*03/22/23 02:35*	*1*
o-Terphenyl	*83*		*70 - 130*	*03/20/23 14:02*	*03/22/23 02:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4270**		25.2		mg/Kg			03/25/23 19:23	5

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-26275-A-1-A MS	Matrix Spike	107	84
880-26275-A-1-B MSD	Matrix Spike Duplicate	107	87
890-4322-1	SS01	116	92
890-4322-2	SS02	125	94
890-4322-3	SS03	112	95
890-4322-4	SS04	61 S1-	85
890-4322-5	SS05	114	96
890-4322-6	SS06	106	105
890-4322-7	SS07	115	99
890-4322-8	SS08	117	97
890-4322-9	SS09	117	102
890-4322-10	SS10	107	102
890-4322-11	SS11	113	102
890-4322-12	SS12	109	100
890-4322-13	SS13	114	105
LCS 880-49324/1-A	Lab Control Sample	110	96
LCSD 880-49324/2-A	Lab Control Sample Dup	104	91
MB 880-49324/5-A	Method Blank	100	86

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4322-1	SS01	85	82
890-4322-1 MS	SS01	95	83
890-4322-1 MSD	SS01	96	85
890-4322-2	SS02	104	103
890-4322-3	SS03	85	84
890-4322-4	SS04	103	95
890-4322-5	SS05	102	91
890-4322-6	SS06	109	98
890-4322-7	SS07	88	85
890-4322-8	SS08	103	96
890-4322-9	SS09	86	84
890-4322-10	SS10	83	80
890-4322-11	SS11	87	84
890-4322-12	SS12	86	82
890-4322-13	SS13	83	83
LCS 880-49014/2-A	Lab Control Sample	94	99
LCSD 880-49014/3-A	Lab Control Sample Dup	91	99
MB 880-49014/1-A	Method Blank	120	125

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-49324/5-A
Matrix: Solid
Analysis Batch: 49364

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49324

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 11:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 11:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 11:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/23/23 12:25	03/24/23 11:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/23/23 12:25	03/24/23 11:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/23/23 12:25	03/24/23 11:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/23/23 12:25*	*03/24/23 11:01*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*03/23/23 12:25*	*03/24/23 11:01*	*1*

Lab Sample ID: LCS 880-49324/1-A
Matrix: Solid
Analysis Batch: 49364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49324

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09131		mg/Kg		91	70 - 130		
Toluene			0.100	0.1005		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.09923		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2114		mg/Kg		106	70 - 130		
o-Xylene			0.100	0.1062		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-49324/2-A
Matrix: Solid
Analysis Batch: 49364

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 49324

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09334		mg/Kg		93	70 - 130	2	35
Toluene			0.100	0.09826		mg/Kg		98	70 - 130	2	35
Ethylbenzene			0.100	0.09510		mg/Kg		95	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1993		mg/Kg		100	70 - 130	6	35
o-Xylene			0.100	0.09976		mg/Kg		100	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 880-26275-A-1-A MS
Matrix: Solid
Analysis Batch: 49364

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 49324

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0996	0.08204		mg/Kg		82	70 - 130		
Toluene	<0.00199	U	0.0996	0.09077		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

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

Lab Sample ID: 880-26275-A-1-A MS
Matrix: Solid
Analysis Batch: 49364

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 49324

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0996	0.09357		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1969		mg/Kg		99	70 - 130
o-Xylene	<0.00199	U	0.0996	0.09722		mg/Kg		98	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: 880-26275-A-1-B MSD
Matrix: Solid
Analysis Batch: 49364

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 49324

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0992	0.07740		mg/Kg		78	70 - 130	6	35
Toluene	<0.00199	U	0.0992	0.08878		mg/Kg		89	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.0992	0.09264		mg/Kg		93	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1955		mg/Kg		99	70 - 130	1	35
o-Xylene	<0.00199	U	0.0992	0.09625		mg/Kg		97	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

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

Lab Sample ID: MB 880-49014/1-A
Matrix: Solid
Analysis Batch: 49067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49014

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/21/23 19:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/21/23 19:58	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/20/23 14:02	03/21/23 19:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*03/20/23 14:02*	*03/21/23 19:58*	*1*
o-Terphenyl	*125*		*70 - 130*	*03/20/23 14:02*	*03/21/23 19:58*	*1*

Lab Sample ID: LCS 880-49014/2-A
Matrix: Solid
Analysis Batch: 49067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49014

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	891.1		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)			1000	825.9		mg/Kg		83	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

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

Lab Sample ID: LCS 880-49014/2-A
Matrix: Solid
Analysis Batch: 49067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49014

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Lab Sample ID: LCSD 880-49014/3-A
Matrix: Solid
Analysis Batch: 49067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 49014

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	801.0		mg/Kg		80	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	838.8		mg/Kg		84	70 - 130	2	20

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

Lab Sample ID: 890-4322-1 MS
Matrix: Solid
Analysis Batch: 49067

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 49014

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1052		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	139		998	1045		mg/Kg		91	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: 890-4322-1 MSD
Matrix: Solid
Analysis Batch: 49067

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 49014

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1078		mg/Kg		106	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	139		999	1066		mg/Kg		93	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-49264/1-A
Matrix: Solid
Analysis Batch: 49491

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/25/23 17:07	1

Lab Sample ID: LCS 880-49264/2-A
Matrix: Solid
Analysis Batch: 49491

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.8		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-49264/3-A
Matrix: Solid
Analysis Batch: 49491

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	262.5		mg/Kg		105	90 - 110	4	20

Lab Sample ID: 890-4322-4 MS
Matrix: Solid
Analysis Batch: 49491

Client Sample ID: SS04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	503		253	772.9		mg/Kg		107	90 - 110		

Lab Sample ID: 890-4322-4 MSD
Matrix: Solid
Analysis Batch: 49491

Client Sample ID: SS04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	503		253	768.2		mg/Kg		105	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

GC VOA

Prep Batch: 49324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Total/NA	Solid	5035	
890-4322-2	SS02	Total/NA	Solid	5035	
890-4322-3	SS03	Total/NA	Solid	5035	
890-4322-4	SS04	Total/NA	Solid	5035	
890-4322-5	SS05	Total/NA	Solid	5035	
890-4322-6	SS06	Total/NA	Solid	5035	
890-4322-7	SS07	Total/NA	Solid	5035	
890-4322-8	SS08	Total/NA	Solid	5035	
890-4322-9	SS09	Total/NA	Solid	5035	
890-4322-10	SS10	Total/NA	Solid	5035	
890-4322-11	SS11	Total/NA	Solid	5035	
890-4322-12	SS12	Total/NA	Solid	5035	
890-4322-13	SS13	Total/NA	Solid	5035	
MB 880-49324/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-49324/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-49324/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-26275-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-26275-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 49364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Total/NA	Solid	8021B	49324
890-4322-2	SS02	Total/NA	Solid	8021B	49324
890-4322-3	SS03	Total/NA	Solid	8021B	49324
890-4322-4	SS04	Total/NA	Solid	8021B	49324
890-4322-5	SS05	Total/NA	Solid	8021B	49324
890-4322-6	SS06	Total/NA	Solid	8021B	49324
890-4322-7	SS07	Total/NA	Solid	8021B	49324
890-4322-8	SS08	Total/NA	Solid	8021B	49324
890-4322-9	SS09	Total/NA	Solid	8021B	49324
890-4322-10	SS10	Total/NA	Solid	8021B	49324
890-4322-11	SS11	Total/NA	Solid	8021B	49324
890-4322-12	SS12	Total/NA	Solid	8021B	49324
890-4322-13	SS13	Total/NA	Solid	8021B	49324
MB 880-49324/5-A	Method Blank	Total/NA	Solid	8021B	49324
LCS 880-49324/1-A	Lab Control Sample	Total/NA	Solid	8021B	49324
LCSD 880-49324/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	49324
880-26275-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	49324
880-26275-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	49324

Analysis Batch: 49493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Total/NA	Solid	Total BTEX	
890-4322-2	SS02	Total/NA	Solid	Total BTEX	
890-4322-3	SS03	Total/NA	Solid	Total BTEX	
890-4322-4	SS04	Total/NA	Solid	Total BTEX	
890-4322-5	SS05	Total/NA	Solid	Total BTEX	
890-4322-6	SS06	Total/NA	Solid	Total BTEX	
890-4322-7	SS07	Total/NA	Solid	Total BTEX	
890-4322-8	SS08	Total/NA	Solid	Total BTEX	
890-4322-9	SS09	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

GC VOA (Continued)

Analysis Batch: 49493 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-10	SS10	Total/NA	Solid	Total BTEX	
890-4322-11	SS11	Total/NA	Solid	Total BTEX	
890-4322-12	SS12	Total/NA	Solid	Total BTEX	
890-4322-13	SS13	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 49014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Total/NA	Solid	8015NM Prep	
890-4322-2	SS02	Total/NA	Solid	8015NM Prep	
890-4322-3	SS03	Total/NA	Solid	8015NM Prep	
890-4322-4	SS04	Total/NA	Solid	8015NM Prep	
890-4322-5	SS05	Total/NA	Solid	8015NM Prep	
890-4322-6	SS06	Total/NA	Solid	8015NM Prep	
890-4322-7	SS07	Total/NA	Solid	8015NM Prep	
890-4322-8	SS08	Total/NA	Solid	8015NM Prep	
890-4322-9	SS09	Total/NA	Solid	8015NM Prep	
890-4322-10	SS10	Total/NA	Solid	8015NM Prep	
890-4322-11	SS11	Total/NA	Solid	8015NM Prep	
890-4322-12	SS12	Total/NA	Solid	8015NM Prep	
890-4322-13	SS13	Total/NA	Solid	8015NM Prep	
MB 880-49014/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-49014/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-49014/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4322-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-4322-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 49067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Total/NA	Solid	8015B NM	49014
890-4322-2	SS02	Total/NA	Solid	8015B NM	49014
890-4322-3	SS03	Total/NA	Solid	8015B NM	49014
890-4322-4	SS04	Total/NA	Solid	8015B NM	49014
890-4322-5	SS05	Total/NA	Solid	8015B NM	49014
890-4322-6	SS06	Total/NA	Solid	8015B NM	49014
890-4322-7	SS07	Total/NA	Solid	8015B NM	49014
890-4322-8	SS08	Total/NA	Solid	8015B NM	49014
890-4322-9	SS09	Total/NA	Solid	8015B NM	49014
890-4322-10	SS10	Total/NA	Solid	8015B NM	49014
890-4322-11	SS11	Total/NA	Solid	8015B NM	49014
890-4322-12	SS12	Total/NA	Solid	8015B NM	49014
890-4322-13	SS13	Total/NA	Solid	8015B NM	49014
MB 880-49014/1-A	Method Blank	Total/NA	Solid	8015B NM	49014
LCS 880-49014/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	49014
LCSD 880-49014/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	49014
890-4322-1 MS	SS01	Total/NA	Solid	8015B NM	49014
890-4322-1 MSD	SS01	Total/NA	Solid	8015B NM	49014

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

GC Semi VOA

Analysis Batch: 49233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Total/NA	Solid	8015 NM	
890-4322-2	SS02	Total/NA	Solid	8015 NM	
890-4322-3	SS03	Total/NA	Solid	8015 NM	
890-4322-4	SS04	Total/NA	Solid	8015 NM	
890-4322-5	SS05	Total/NA	Solid	8015 NM	
890-4322-6	SS06	Total/NA	Solid	8015 NM	
890-4322-7	SS07	Total/NA	Solid	8015 NM	
890-4322-8	SS08	Total/NA	Solid	8015 NM	
890-4322-9	SS09	Total/NA	Solid	8015 NM	
890-4322-10	SS10	Total/NA	Solid	8015 NM	
890-4322-11	SS11	Total/NA	Solid	8015 NM	
890-4322-12	SS12	Total/NA	Solid	8015 NM	
890-4322-13	SS13	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 49264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Soluble	Solid	DI Leach	
890-4322-2	SS02	Soluble	Solid	DI Leach	
890-4322-3	SS03	Soluble	Solid	DI Leach	
890-4322-4	SS04	Soluble	Solid	DI Leach	
890-4322-5	SS05	Soluble	Solid	DI Leach	
890-4322-6	SS06	Soluble	Solid	DI Leach	
890-4322-7	SS07	Soluble	Solid	DI Leach	
890-4322-8	SS08	Soluble	Solid	DI Leach	
890-4322-9	SS09	Soluble	Solid	DI Leach	
890-4322-10	SS10	Soluble	Solid	DI Leach	
890-4322-11	SS11	Soluble	Solid	DI Leach	
890-4322-12	SS12	Soluble	Solid	DI Leach	
890-4322-13	SS13	Soluble	Solid	DI Leach	
MB 880-49264/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-49264/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-49264/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4322-4 MS	SS04	Soluble	Solid	DI Leach	
890-4322-4 MSD	SS04	Soluble	Solid	DI Leach	

Analysis Batch: 49491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-1	SS01	Soluble	Solid	300.0	49264
890-4322-2	SS02	Soluble	Solid	300.0	49264
890-4322-3	SS03	Soluble	Solid	300.0	49264
890-4322-4	SS04	Soluble	Solid	300.0	49264
890-4322-5	SS05	Soluble	Solid	300.0	49264
890-4322-6	SS06	Soluble	Solid	300.0	49264
890-4322-7	SS07	Soluble	Solid	300.0	49264
890-4322-8	SS08	Soluble	Solid	300.0	49264
890-4322-9	SS09	Soluble	Solid	300.0	49264
890-4322-10	SS10	Soluble	Solid	300.0	49264
890-4322-11	SS11	Soluble	Solid	300.0	49264
890-4322-12	SS12	Soluble	Solid	300.0	49264

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

HPLC/IC (Continued)

Analysis Batch: 49491 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4322-13	SS13	Soluble	Solid	300.0	49264
MB 880-49264/1-A	Method Blank	Soluble	Solid	300.0	49264
LCS 880-49264/2-A	Lab Control Sample	Soluble	Solid	300.0	49264
LCSD 880-49264/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	49264
890-4322-4 MS	SS04	Soluble	Solid	300.0	49264
890-4322-4 MSD	SS04	Soluble	Solid	300.0	49264

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS01

Lab Sample ID: 890-4322-1

Date Collected: 03/13/23 13:25
Matrix: Solid
Date Received: 03/15/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 13:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/21/23 21:04	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49491	03/25/23 18:11	SMC	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-4322-2

Date Collected: 03/13/23 12:30
Matrix: Solid
Date Received: 03/15/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 14:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/21/23 22:11	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49491	03/25/23 18:15	SMC	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-4322-3

Date Collected: 03/13/23 13:05
Matrix: Solid
Date Received: 03/15/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 14:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/21/23 22:33	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49491	03/25/23 18:20	SMC	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-4322-4

Date Collected: 03/13/23 12:40
Matrix: Solid
Date Received: 03/15/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 16:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 13:13	MNR	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS04

Date Collected: 03/13/23 12:40
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/21/23 22:55	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49491	03/25/23 18:24	SMC	EET MID

Client Sample ID: SS05

Date Collected: 03/13/23 13:00
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 16:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 13:13	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/21/23 23:17	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	49491	03/25/23 18:38	SMC	EET MID

Client Sample ID: SS06

Date Collected: 03/13/23 12:35
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 16:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 13:13	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/21/23 23:39	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49491	03/25/23 18:42	SMC	EET MID

Client Sample ID: SS07

Date Collected: 03/13/23 12:25
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 17:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 13:13	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/22/23 00:00	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS07

Date Collected: 03/13/23 12:25
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49491	03/25/23 18:56	SMC	EET MID

Client Sample ID: SS08

Date Collected: 03/13/23 13:45
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 17:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/22/23 00:22	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	49491	03/25/23 19:01	SMC	EET MID

Client Sample ID: SS09

Date Collected: 03/13/23 13:50
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 17:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/22/23 00:44	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49491	03/25/23 19:05	SMC	EET MID

Client Sample ID: SS10

Date Collected: 03/13/23 13:55
Date Received: 03/15/23 14:29

Lab Sample ID: 890-4322-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 18:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/22/23 01:06	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49491	03/25/23 19:10	SMC	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Client Sample ID: SS11

Lab Sample ID: 890-4322-11

Date Collected: 03/13/23 14:00
Matrix: Solid
Date Received: 03/15/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 18:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/22/23 01:50	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49491	03/27/23 17:00	SMC	EET MID

Client Sample ID: SS12

Lab Sample ID: 890-4322-12

Date Collected: 03/13/23 14:25
Matrix: Solid
Date Received: 03/15/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 18:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/22/23 02:13	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49491	03/25/23 19:19	SMC	EET MID

Client Sample ID: SS13

Lab Sample ID: 890-4322-13

Date Collected: 03/13/23 14:30
Matrix: Solid
Date Received: 03/15/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	49324	03/23/23 12:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49364	03/24/23 19:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49493	03/25/23 16:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			49233	03/22/23 16:11	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49014	03/20/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49067	03/22/23 02:35	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	49264	03/22/23 22:06	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49491	03/25/23 19:23	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4322-1
SDG: 03D2024167

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4322-1	SS01	Solid	03/13/23 13:25	03/15/23 14:29	0.25'
890-4322-2	SS02	Solid	03/13/23 12:30	03/15/23 14:29	0.25'
890-4322-3	SS03	Solid	03/13/23 13:05	03/15/23 14:29	0.25'
890-4322-4	SS04	Solid	03/13/23 12:40	03/15/23 14:29	0.25'
890-4322-5	SS05	Solid	03/13/23 13:00	03/15/23 14:29	0.25'
890-4322-6	SS06	Solid	03/13/23 12:35	03/15/23 14:29	0.25'
890-4322-7	SS07	Solid	03/13/23 12:25	03/15/23 14:29	0.25'
890-4322-8	SS08	Solid	03/13/23 13:45	03/15/23 14:29	0.25'
890-4322-9	SS09	Solid	03/13/23 13:50	03/15/23 14:29	0.25'
890-4322-10	SS10	Solid	03/13/23 13:55	03/15/23 14:29	0.25'
890-4322-11	SS11	Solid	03/13/23 14:00	03/15/23 14:29	0.25'
890-4322-12	SS12	Solid	03/13/23 14:25	03/15/23 14:29	0.25'
890-4322-13	SS13	Solid	03/13/23 14:30	03/15/23 14:29	0.25'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Hadlie Green
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	Cabo Wabo Federal Com 801H	Turn Around	
Project Number:	03D2024167	☑ Routine ☐ Rush	
Project Location:	32.1222,-103.9325	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR#007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.4
Total Containers:		Corrected Temperature:	5.2

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

ANALYSIS REQUEST

Pres. Code / Parameters

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SS01	Soil	3/13/2023	1325	0.25'	Comp	1	x	x	x	
SS02	Soil	3/13/2023	1230	0.25'	Comp	1	x	x	x	
SS03	Soil	3/13/2023	1305	0.25'	Comp	1	x	x	x	
SS04	Soil	3/13/2023	1240	0.25'	Comp	1	x	x	x	
SS05	Soil	3/13/2023	1300	0.25'	Comp	1	x	x	x	
SS06	Soil	3/13/2023	1235	0.25'	Comp	1	x	x	x	
SS07	Soil	3/13/2023	1225	0.25'	Comp	1	x	x	x	
SS08	Soil	3/13/2023	1345	0.25'	Comp	1	x	x	x	
SS09	Soil	3/13/2023	1350	0.25'	Comp	1	x	x	x	
SS10	Soil	3/13/2023	1355	0.25'	Comp	1	x	x	x	

890-4322 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten	Amanda Stuff	3/15/23 1429			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Hadlie Green
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	Cabo Wabo Federal Com 801H	Turn Around	
Project Number:	03D2024167	☑ Routine ☐ Rush	
Project Location:	32.1222,-103.9325	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SS11	Soil	3/13/2023	1400	0.25'	Comp	1		x	x	x	
SS12	Soil	3/13/2023	1425	0.25'	Comp	1		x	x	x	
SS13	Soil	3/13/2023	1430	0.25'	Comp	1		x	x	x	

Parameters

ANALYSIS REQUEST

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Amanda Short	3/15/23 1427			
3				4		
5				6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4322-1
SDG Number: 03D2024167

Login Number: 4322
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4322-1
SDG Number: 03D2024167

Login Number: 4322
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 03/17/23 11:17 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/24/2023 11:26:23 AM Revision 1

JOB DESCRIPTION

Cabo Wabo Federal Com 801H
SDG NUMBER 03D2024167

JOB NUMBER

890-4659-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

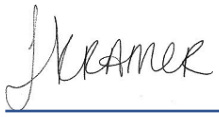
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
5/24/2023 11:26:23 AM
Revision 1

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

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Laboratory Job ID: 890-4659-1
SDG: 03D2024167

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Job ID: 890-4659-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4659-1

REVISION

The report being provided is a revision of the original report sent on 5/22/2023. The report (revision 1) is being revised due to Per client email, requesting re run on sample SS07A.

Receipt
The samples were received on 5/12/2023 1:13 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 2.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4659-1), FS02 (890-4659-2), FS05A (890-4659-3), SS06A (890-4659-4), SS07A (890-4659-5), SS08A (890-4659-6), SS09A (890-4659-7), SS10A (890-4659-8), SS11A (890-4659-9), SS12A (890-4659-10), SS13A (890-4659-11), SS14 (890-4659-12), SS15 (890-4659-13), SS16 (890-4659-14) and SS17 (890-4659-15).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS02 (890-4659-2), SS09A (890-4659-7), SS11A (890-4659-9), SS17 (890-4659-15) and (CCV 880-53724/52). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-53496/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS07A (890-4659-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53456 and analytical batch 880-53447 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-53447/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-53447/20). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-4659-1), FS05A (890-4659-3), SS07A (890-4659-5), SS08A (890-4659-6) and SS10A (890-4659-8). 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: (CCV 880-53447/31). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53456 and analytical batch 880-53447 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.

Case Narrative

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Job ID: 890-4659-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53469 and analytical batch 880-53450 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-53469/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS11A (890-4659-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS12A (890-4659-10), SS13A (890-4659-11), SS14 (890-4659-12), SS15 (890-4659-13) and SS16 (890-4659-14). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53485 and analytical batch 880-53552 was outside the upper control limits.

Method 8015MOD_NM: CCV biased low for Diesel Range Organics (Over C10-C28) however an acceptable CCV was ran within the 12 hour window therefore the data has been qualified and reported.(CCV 880-53552/5)

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-53485 and analytical batch 880-53552 was outside control limits. Sample non-homogeneity is suspected.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53947 and analytical batch 880-53936 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53947 and analytical batch 880-53936 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 duplicate (LCSD) recovery is within acceptance limits.

Method 8015MOD_NM: LCS biased high for Diesel Range Organics (Over C10-C28). Since only an acceptable LCS or LCSD is required per the method, the LCSD shows recovery for the batch and the data has been qualified and reported.(LCS 880-53947/2-A)

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 880-53364 and 880-53364 and analytical batch 880-53574 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: FS01
Date Collected: 05/12/23 09:25
Date Received: 05/12/23 13:13
Sample Depth: 0.5'

Lab Sample ID: 890-4659-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 09:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 09:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*05/16/23 15:13*	*05/20/23 09:10*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*05/16/23 15:13*	*05/20/23 09:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 16:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 16:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/16/23 08:49*	*05/16/23 16:42*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*05/16/23 08:49*	*05/16/23 16:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**386**	**F1**	4.96		mg/Kg			05/17/23 18:16	1

Client Sample ID: FS02
Date Collected: 05/12/23 09:30
Date Received: 05/12/23 13:13
Sample Depth: 0.5'

Lab Sample ID: 890-4659-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 09:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 09:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 09:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/16/23 15:13*	*05/20/23 09:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: FS02

Date Collected: 05/12/23 09:30
Date Received: 05/12/23 13:13
Sample Depth: 0.5'

Lab Sample ID: 890-4659-2
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*05/16/23 15:13*	*05/20/23 09:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/16/23 08:49	05/16/23 17:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/16/23 08:49	05/16/23 17:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/16/23 08:49	05/16/23 17:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*105*		*70 - 130*	*05/16/23 08:49*	*05/16/23 17:03*	*1*
o-Terphenyl	*125*		*70 - 130*	*05/16/23 08:49*	*05/16/23 17:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**472**		25.2	mg/Kg			05/17/23 18:32	5

Client Sample ID: FS05A

Date Collected: 05/12/23 09:45
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 09:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 09:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 09:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/16/23 15:13	05/20/23 09:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 09:52	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/16/23 15:13	05/20/23 09:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/23 15:13*	*05/20/23 09:52*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/16/23 15:13*	*05/20/23 09:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/17/23 10:58	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: FS05A
Date Collected: 05/12/23 09:45
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 17:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 17:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/16/23 08:49*	*05/16/23 17:25*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*05/16/23 08:49*	*05/16/23 17:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**216**		4.97		mg/Kg			05/17/23 18:38	1

Client Sample ID: SS06A
Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:12	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/16/23 15:13	05/20/23 10:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:12	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/16/23 15:13	05/20/23 10:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*05/16/23 15:13*	*05/20/23 10:12*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/16/23 15:13*	*05/20/23 10:12*	*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			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 17:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 17:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*05/16/23 08:49*	*05/16/23 17:47*	*1*
o-Terphenyl	*126*		*70 - 130*	*05/16/23 08:49*	*05/16/23 17:47*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS06A

Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	229		5.02		mg/Kg			05/17/23 18:43	1

Client Sample ID: SS07A

Date Collected: 05/12/23 09:55
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/23 15:13	05/20/23 10:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 10:33	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/23 15:13	05/20/23 10:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/23 15:13*	*05/20/23 10:33*	*1*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*05/16/23 15:13*	*05/20/23 10:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/23/23 08:48	05/23/23 19:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		05/23/23 08:48	05/23/23 19:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/23/23 08:48	05/23/23 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/23/23 08:48*	*05/23/23 19:53*	*1*
o-Terphenyl	*123*		*70 - 130*	*05/23/23 08:48*	*05/23/23 19:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	226		5.04		mg/Kg			05/17/23 18:48	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS08A

Date Collected: 05/12/23 10:00
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 10:54	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 10:54	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 10:54	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/16/23 15:13	05/20/23 10:54	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 10:54	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/16/23 15:13	05/20/23 10:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/23 15:13*	*05/20/23 10:54*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*05/16/23 15:13*	*05/20/23 10:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 18:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 18:28	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 08:49	05/16/23 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*05/16/23 08:49*	*05/16/23 18:28*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*05/16/23 08:49*	*05/16/23 18:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**236**		4.98		mg/Kg			05/17/23 19:04	1

Client Sample ID: SS09A

Date Collected: 05/12/23 10:05
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 11:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 11:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 11:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 11:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 11:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 11:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*05/16/23 15:13*	*05/20/23 11:14*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS09A
Date Collected: 05/12/23 10:05
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*05/16/23 15:13*	*05/20/23 11:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/17/23 10:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/16/23 08:49	05/16/23 18:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/16/23 08:49	05/16/23 18:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/16/23 08:49	05/16/23 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/16/23 08:49*	*05/16/23 18:49*	*1*
o-Terphenyl	*113*		*70 - 130*	*05/16/23 08:49*	*05/16/23 18:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**317**		4.96	mg/Kg			05/17/23 19:10	1

Client Sample ID: SS10A
Date Collected: 05/12/23 10:10
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/16/23 15:13	05/20/23 11:35	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/16/23 15:13	05/20/23 11:35	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/16/23 15:13	05/20/23 11:35	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/16/23 15:13	05/20/23 11:35	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/16/23 15:13	05/20/23 11:35	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/16/23 15:13	05/20/23 11:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*05/16/23 15:13*	*05/20/23 11:35*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/16/23 15:13*	*05/20/23 11:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/17/23 10:58	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS10A
Date Collected: 05/12/23 10:10
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 19:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 19:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/16/23 08:49*	*05/16/23 19:09*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*05/16/23 08:49*	*05/16/23 19:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**310**		4.97		mg/Kg			05/17/23 19:15	1

Client Sample ID: SS11A
Date Collected: 05/12/23 10:15
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/23 15:13	05/20/23 11:55	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/23 15:13	05/20/23 11:55	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/23 15:13	05/20/23 11:55	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/23 15:13	05/20/23 11:55	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/23 15:13	05/20/23 11:55	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/23 15:13	05/20/23 11:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/16/23 15:13*	*05/20/23 11:55*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*05/16/23 15:13*	*05/20/23 11:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/16/23 20:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/16/23 20:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 11:47	05/16/23 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*05/16/23 11:47*	*05/16/23 20:53*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 20:53*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS11A

Date Collected: 05/12/23 10:15
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	313		5.01		mg/Kg			05/17/23 19:21	1

Client Sample ID: SS12A

Date Collected: 05/12/23 10:20
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-10
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 12:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 12:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 12:16	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/16/23 15:13	05/20/23 12:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 12:16	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/16/23 15:13	05/20/23 12:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/16/23 15:13*	*05/20/23 12:16*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*05/16/23 15:13*	*05/20/23 12:16*	*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			05/22/23 15:52	1

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			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/16/23 21:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/16/23 21:56	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/16/23 11:47	05/16/23 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*05/16/23 11:47*	*05/16/23 21:56*	*1*
o-Terphenyl	*152*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 21:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	332		5.04		mg/Kg			05/17/23 19:26	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS13A
Date Collected: 05/12/23 09:25
Date Received: 05/12/23 13:13
Sample Depth: 0.5'

Lab Sample ID: 890-4659-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 13:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 13:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 13:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 13:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 13:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/16/23 15:13*	*05/20/23 13:39*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/16/23 15:13*	*05/20/23 13:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 22:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 22:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*05/16/23 11:47*	*05/16/23 22:17*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 22:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**335**	**F1**	4.99		mg/Kg			05/17/23 19:31	1

Client Sample ID: SS14
Date Collected: 05/12/23 09:30
Date Received: 05/12/23 13:13
Sample Depth: 0.5'

Lab Sample ID: 890-4659-12
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 13:59	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 13:59	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 13:59	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/16/23 15:13	05/20/23 13:59	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/23 15:13	05/20/23 13:59	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/16/23 15:13	05/20/23 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*05/16/23 15:13*	*05/20/23 13:59*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS14

Date Collected: 05/12/23 09:30
Date Received: 05/12/23 13:13
Sample Depth: 0.5'

Lab Sample ID: 890-4659-12
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*05/16/23 15:13*	*05/20/23 13:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			05/22/23 15:52	1

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			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/16/23 11:47	05/16/23 22:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/16/23 11:47	05/16/23 22:39	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/16/23 11:47	05/16/23 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*05/16/23 11:47*	*05/16/23 22:39*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 22:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**326**		4.95	mg/Kg			05/17/23 19:47	1

Client Sample ID: SS15

Date Collected: 05/12/23 09:45
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 14:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 14:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 14:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/16/23 15:13	05/20/23 14:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/23 15:13	05/20/23 14:20	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/16/23 15:13	05/20/23 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*05/16/23 15:13*	*05/20/23 14:20*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*05/16/23 15:13*	*05/20/23 14:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/17/23 12:07	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS15

Lab Sample ID: 890-4659-13
Matrix: Solid
Date Collected: 05/12/23 09:45
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 22:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 22:59	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*05/16/23 11:47*	*05/16/23 22:59*	*1*
o-Terphenyl	*148*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 22:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**353**		4.97		mg/Kg			05/17/23 19:53	1

Client Sample ID: SS16

Lab Sample ID: 890-4659-14
Matrix: Solid
Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 14:40	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 14:40	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 14:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 14:40	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 14:40	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*05/16/23 15:13*	*05/20/23 14:40*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*05/16/23 15:13*	*05/20/23 14:40*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/23 12:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 23:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 23:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 23:20*	*1*
o-Terphenyl	*161*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 23:20*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS16
Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-14
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	285		5.03		mg/Kg			05/17/23 20:09	1

Client Sample ID: SS17
Date Collected: 05/12/23 09:55
Date Received: 05/12/23 13:13
Sample Depth: 1.0'

Lab Sample ID: 890-4659-15
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 15:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 15:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 15:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 15:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/23 15:13	05/20/23 15:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/23 15:13	05/20/23 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/23 15:13*	*05/20/23 15:00*	*1*
1,4-Difluorobenzene (Surr)	*57*	*S1-*	*70 - 130*	*05/16/23 15:13*	*05/20/23 15:00*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 15:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/18/23 12:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/23 12:56	05/17/23 19:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/23 12:56	05/17/23 19:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/23 12:56	05/17/23 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/16/23 12:56*	*05/17/23 19:03*	*1*
o-Terphenyl	*116*		*70 - 130*	*05/16/23 12:56*	*05/17/23 19:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	293		5.02		mg/Kg			05/17/23 20:14	1

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-4659-1	FS01	98	70
890-4659-1 MS	FS01	125	105
890-4659-1 MSD	FS01	115	111
890-4659-2	FS02	103	65 S1-
890-4659-3	FS05A	102	86
890-4659-4	SS06A	93	90
890-4659-5	SS07A	102	64 S1-
890-4659-6	SS08A	102	83
890-4659-7	SS09A	105	64 S1-
890-4659-8	SS10A	87	84
890-4659-9	SS11A	100	68 S1-
890-4659-10	SS12A	104	71
890-4659-11	SS13A	100	94
890-4659-12	SS14	85	73
890-4659-13	SS15	89	70
890-4659-14	SS16	89	82
890-4659-15	SS17	102	57 S1-
LCS 880-53496/1-A	Lab Control Sample	116	101
LCSD 880-53496/2-A	Lab Control Sample Dup	111	110
MB 880-53496/5-A	Method Blank	69 S1-	88
MB 880-53768/5-A	Method Blank	90	100

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-28417-A-1-E MS	Matrix Spike	104	104
880-28417-A-1-F MSD	Matrix Spike Duplicate	89	91
890-4652-A-26-D MS	Matrix Spike	103	103
890-4652-A-26-E MSD	Matrix Spike Duplicate	105	108
890-4659-1	FS01	115	138 S1+
890-4659-2	FS02	105	125
890-4659-3	FS05A	109	133 S1+
890-4659-4	SS06A	101	126
890-4659-5	SS07A	107	123
890-4659-6	SS08A	110	137 S1+
890-4659-7	SS09A	92	113
890-4659-8	SS10A	113	135 S1+
890-4659-9	SS11A	118	144 S1+
890-4659-9 MS	SS11A	116	128
890-4659-9 MSD	SS11A	112	127
890-4659-10	SS12A	125	152 S1+
890-4659-11	SS13A	116	143 S1+
890-4659-12	SS14	115	142 S1+

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
890-4659-13	SS15	128	148 S1+								
890-4659-14	SS16	136 S1+	161 S1+								
890-4659-15	SS17	108	116								
890-4700-A-21-B MS	Matrix Spike	115	107								
890-4700-A-21-C MSD	Matrix Spike Duplicate	109	98								
LCS 880-53456/2-A	Lab Control Sample	103	118								
LCS 880-53469/2-A	Lab Control Sample	93	117								
LCS 880-53485/2-A	Lab Control Sample	76	84								
LCS 880-53947/2-A	Lab Control Sample	91	99								
LCSD 880-53456/3-A	Lab Control Sample Dup	95	112								
LCSD 880-53469/3-A	Lab Control Sample Dup	110	135 S1+								
LCSD 880-53485/3-A	Lab Control Sample Dup	90	101								
LCSD 880-53947/3-A	Lab Control Sample Dup	91	98								
MB 880-53456/1-A	Method Blank	160 S1+	199 S1+								
MB 880-53469/1-A	Method Blank	164 S1+	211 S1+								
MB 880-53485/1-A	Method Blank	176 S1+	199 S1+								
MB 880-53947/1-A	Method Blank	168 S1+	195 S1+								

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53496/5-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53496

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 08:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 08:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 08:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/23 15:13	05/20/23 08:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:13	05/20/23 08:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/23 15:13	05/20/23 08:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*05/16/23 15:13*	*05/20/23 08:49*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/16/23 15:13*	*05/20/23 08:49*	*1*

Lab Sample ID: LCS 880-53496/1-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1100		mg/Kg		110	70 - 130		
Toluene			0.100	0.09513		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.1021		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2096		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1271		mg/Kg		127	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-53496/2-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53496

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1234		mg/Kg		123	70 - 130	11	35
Toluene			0.100	0.1044		mg/Kg		104	70 - 130	9	35
Ethylbenzene			0.100	0.1038		mg/Kg		104	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2166		mg/Kg		108	70 - 130	3	35
o-Xylene			0.100	0.1176		mg/Kg		118	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-4659-1 MS
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 53496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.09993		mg/Kg		100	70 - 130		
Toluene	<0.00199	U	0.0998	0.09211		mg/Kg		92	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Lab Sample ID: 890-4659-1 MS
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 53496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.1008		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1947		mg/Kg		98	70 - 130
o-Xylene	<0.00199	U	0.0998	0.1111		mg/Kg		111	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-4659-1 MSD
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 53496

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.1077		mg/Kg		109	70 - 130	7	35
Toluene	<0.00199	U	0.0990	0.08946		mg/Kg		90	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.0990	0.09339		mg/Kg		94	70 - 130	8	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1839		mg/Kg		93	70 - 130	6	35
o-Xylene	<0.00199	U	0.0990	0.1014		mg/Kg		102	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: MB 880-53768/5-A
Matrix: Solid
Analysis Batch: 53724

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53768

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/19/23 22:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/19/23 22:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/19/23 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/23 11:17	05/19/23 22:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/23 11:17	05/19/23 22:14	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/23 11:17	05/19/23 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/19/23 11:17*	*05/19/23 22:14*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/19/23 11:17*	*05/19/23 22:14*	*1*

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

Lab Sample ID: MB 880-53456/1-A
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53456

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/16/23 08:49	05/16/23 08:50	1

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Lab Sample ID: MB 880-53456/1-A
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53456

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 08:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 08:49	05/16/23 08:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*160*	*S1+*	*70 - 130*	*05/16/23 08:49*	*05/16/23 08:50*	*1*
o-Terphenyl	*199*	*S1+*	*70 - 130*	*05/16/23 08:49*	*05/16/23 08:50*	*1*

Lab Sample ID: LCS 880-53456/2-A
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53456

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	787.2		mg/Kg		79	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	936.8		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: LCSD 880-53456/3-A
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53456

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	879.2		mg/Kg		88	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	930.5		mg/Kg		93	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*112*		*70 - 130*

Lab Sample ID: 890-4652-A-26-D MS
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53456

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	980.0		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	135	F1	998	768.2	F1	mg/Kg		63	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Lab Sample ID: 890-4652-A-26-E MSD
Matrix: Solid
Analysis Batch: 53447

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53456

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	997	1010		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	135	F1	997	786.4	F1	mg/Kg		65	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: MB 880-53469/1-A
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53469

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 19:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 19:50	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/23 11:47	05/16/23 19:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*164*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 19:50*	*1*
o-Terphenyl	*211*	*S1+*	*70 - 130*	*05/16/23 11:47*	*05/16/23 19:50*	*1*

Lab Sample ID: LCS 880-53469/2-A
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53469

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	918.7		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	933.5		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Lab Sample ID: LCSD 880-53469/3-A
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53469

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	973.4		mg/Kg		97	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	971.2		mg/Kg		97	70 - 130	4	20

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Lab Sample ID: LCSD 880-53469/3-A
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53469

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

Lab Sample ID: 890-4659-9 MS
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: SS11A
Prep Type: Total/NA
Prep Batch: 53469

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	952.0		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1087		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*128*		*70 - 130*

Lab Sample ID: 890-4659-9 MSD
Matrix: Solid
Analysis Batch: 53450

Client Sample ID: SS11A
Prep Type: Total/NA
Prep Batch: 53469

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	907.1		mg/Kg		88	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1064		mg/Kg		104	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*127*		*70 - 130*

Lab Sample ID: MB 880-53485/1-A
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53485

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/16/23 12:56	05/17/23 08:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/16/23 12:56	05/17/23 08:32	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/16/23 12:56	05/17/23 08:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*176*	*S1+*	*70 - 130*	*05/16/23 12:56*	*05/17/23 08:32*	*1*
o-Terphenyl	*199*	*S1+*	*70 - 130*	*05/16/23 12:56*	*05/17/23 08:32*	*1*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Lab Sample ID: LCS 880-53485/2-A
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53485

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1013		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	730.7		mg/Kg		73	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*76*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-53485/3-A
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53485

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	983.2		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	726.9		mg/Kg		73	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 880-28417-A-1-E MS
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53485

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F2	996	940.9		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)	62.8		996	956.9		mg/Kg		90	70 - 130		

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

Lab Sample ID: 880-28417-A-1-F MSD
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53485

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F2	996	1163	F2	mg/Kg		114	70 - 130	21	20
Diesel Range Organics (Over C10-C28)	62.8		996	829.5		mg/Kg		77	70 - 130	14	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Lab Sample ID: 880-28417-A-1-F MSD
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53485

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	91		70 - 130

Lab Sample ID: MB 880-53947/1-A
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53947

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 08:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 08:52	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/23/23 08:48	05/23/23 08:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	168	S1+	70 - 130	05/23/23 08:48	05/23/23 08:52	1
o-Terphenyl	195	S1+	70 - 130	05/23/23 08:48	05/23/23 08:52	1

Lab Sample ID: LCS 880-53947/2-A
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53947

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1061		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1399	*+	mg/Kg		140	70 - 130		

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

Lab Sample ID: LCSD 880-53947/3-A
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53947

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1007		mg/Kg		101	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1300		mg/Kg		130	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	98		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Lab Sample ID: 890-4700-A-21-B MS
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53947

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	1085		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	2390	*+ F1	1000	2847	F1	mg/Kg		46	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 890-4700-A-21-C MSD
Matrix: Solid
Analysis Batch: 53936

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53947

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1053		mg/Kg		103	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	2390	*+ F1	998	2702	F1	mg/Kg		31	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53364/1-A
Matrix: Solid
Analysis Batch: 53574

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/17/23 18:00	1

Lab Sample ID: LCS 880-53364/2-A
Matrix: Solid
Analysis Batch: 53574

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	240.9		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-53364/3-A
Matrix: Solid
Analysis Batch: 53574

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	241.2		mg/Kg		96	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4659-1 MS
Matrix: Solid
Analysis Batch: 53574

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	386	F1	248	595.7	F1	mg/Kg		85	90 - 110

Lab Sample ID: 890-4659-1 MSD
Matrix: Solid
Analysis Batch: 53574

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	386	F1	248	596.2	F1	mg/Kg		85	90 - 110	0	20

Lab Sample ID: 890-4659-11 MS
Matrix: Solid
Analysis Batch: 53574

Client Sample ID: SS13A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	335	F1	250	550.0	F1	mg/Kg		86	90 - 110

Lab Sample ID: 890-4659-11 MSD
Matrix: Solid
Analysis Batch: 53574

Client Sample ID: SS13A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	335	F1	250	550.1	F1	mg/Kg		86	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

GC VOA

Prep Batch: 53496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Total/NA	Solid	5035	
890-4659-2	FS02	Total/NA	Solid	5035	
890-4659-3	FS05A	Total/NA	Solid	5035	
890-4659-4	SS06A	Total/NA	Solid	5035	
890-4659-5	SS07A	Total/NA	Solid	5035	
890-4659-6	SS08A	Total/NA	Solid	5035	
890-4659-7	SS09A	Total/NA	Solid	5035	
890-4659-8	SS10A	Total/NA	Solid	5035	
890-4659-9	SS11A	Total/NA	Solid	5035	
890-4659-10	SS12A	Total/NA	Solid	5035	
890-4659-11	SS13A	Total/NA	Solid	5035	
890-4659-12	SS14	Total/NA	Solid	5035	
890-4659-13	SS15	Total/NA	Solid	5035	
890-4659-14	SS16	Total/NA	Solid	5035	
890-4659-15	SS17	Total/NA	Solid	5035	
MB 880-53496/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53496/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53496/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4659-1 MS	FS01	Total/NA	Solid	5035	
890-4659-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 53724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Total/NA	Solid	8021B	53496
890-4659-2	FS02	Total/NA	Solid	8021B	53496
890-4659-3	FS05A	Total/NA	Solid	8021B	53496
890-4659-4	SS06A	Total/NA	Solid	8021B	53496
890-4659-5	SS07A	Total/NA	Solid	8021B	53496
890-4659-6	SS08A	Total/NA	Solid	8021B	53496
890-4659-7	SS09A	Total/NA	Solid	8021B	53496
890-4659-8	SS10A	Total/NA	Solid	8021B	53496
890-4659-9	SS11A	Total/NA	Solid	8021B	53496
890-4659-10	SS12A	Total/NA	Solid	8021B	53496
890-4659-11	SS13A	Total/NA	Solid	8021B	53496
890-4659-12	SS14	Total/NA	Solid	8021B	53496
890-4659-13	SS15	Total/NA	Solid	8021B	53496
890-4659-14	SS16	Total/NA	Solid	8021B	53496
890-4659-15	SS17	Total/NA	Solid	8021B	53496
MB 880-53496/5-A	Method Blank	Total/NA	Solid	8021B	53496
MB 880-53768/5-A	Method Blank	Total/NA	Solid	8021B	53768
LCS 880-53496/1-A	Lab Control Sample	Total/NA	Solid	8021B	53496
LCSD 880-53496/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53496
890-4659-1 MS	FS01	Total/NA	Solid	8021B	53496
890-4659-1 MSD	FS01	Total/NA	Solid	8021B	53496

Prep Batch: 53768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53768/5-A	Method Blank	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

GC VOA

Analysis Batch: 53914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Total/NA	Solid	Total BTEX	
890-4659-2	FS02	Total/NA	Solid	Total BTEX	
890-4659-3	FS05A	Total/NA	Solid	Total BTEX	
890-4659-4	SS06A	Total/NA	Solid	Total BTEX	
890-4659-5	SS07A	Total/NA	Solid	Total BTEX	
890-4659-6	SS08A	Total/NA	Solid	Total BTEX	
890-4659-7	SS09A	Total/NA	Solid	Total BTEX	
890-4659-8	SS10A	Total/NA	Solid	Total BTEX	
890-4659-9	SS11A	Total/NA	Solid	Total BTEX	
890-4659-10	SS12A	Total/NA	Solid	Total BTEX	
890-4659-11	SS13A	Total/NA	Solid	Total BTEX	
890-4659-12	SS14	Total/NA	Solid	Total BTEX	
890-4659-13	SS15	Total/NA	Solid	Total BTEX	
890-4659-14	SS16	Total/NA	Solid	Total BTEX	
890-4659-15	SS17	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Total/NA	Solid	8015B NM	53456
890-4659-2	FS02	Total/NA	Solid	8015B NM	53456
890-4659-3	FS05A	Total/NA	Solid	8015B NM	53456
890-4659-4	SS06A	Total/NA	Solid	8015B NM	53456
890-4659-6	SS08A	Total/NA	Solid	8015B NM	53456
890-4659-7	SS09A	Total/NA	Solid	8015B NM	53456
890-4659-8	SS10A	Total/NA	Solid	8015B NM	53456
MB 880-53456/1-A	Method Blank	Total/NA	Solid	8015B NM	53456
LCS 880-53456/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53456
LCSD 880-53456/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53456
890-4652-A-26-D MS	Matrix Spike	Total/NA	Solid	8015B NM	53456
890-4652-A-26-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53456

Analysis Batch: 53450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-9	SS11A	Total/NA	Solid	8015B NM	53469
890-4659-10	SS12A	Total/NA	Solid	8015B NM	53469
890-4659-11	SS13A	Total/NA	Solid	8015B NM	53469
890-4659-12	SS14	Total/NA	Solid	8015B NM	53469
890-4659-13	SS15	Total/NA	Solid	8015B NM	53469
890-4659-14	SS16	Total/NA	Solid	8015B NM	53469
MB 880-53469/1-A	Method Blank	Total/NA	Solid	8015B NM	53469
LCS 880-53469/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53469
LCSD 880-53469/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53469
890-4659-9 MS	SS11A	Total/NA	Solid	8015B NM	53469
890-4659-9 MSD	SS11A	Total/NA	Solid	8015B NM	53469

Prep Batch: 53456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Total/NA	Solid	8015NM Prep	
890-4659-2	FS02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

GC Semi VOA (Continued)

Prep Batch: 53456 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-3	FS05A	Total/NA	Solid	8015NM Prep	
890-4659-4	SS06A	Total/NA	Solid	8015NM Prep	
890-4659-6	SS08A	Total/NA	Solid	8015NM Prep	
890-4659-7	SS09A	Total/NA	Solid	8015NM Prep	
890-4659-8	SS10A	Total/NA	Solid	8015NM Prep	
MB 880-53456/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53456/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53456/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4652-A-26-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4652-A-26-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 53469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-9	SS11A	Total/NA	Solid	8015NM Prep	
890-4659-10	SS12A	Total/NA	Solid	8015NM Prep	
890-4659-11	SS13A	Total/NA	Solid	8015NM Prep	
890-4659-12	SS14	Total/NA	Solid	8015NM Prep	
890-4659-13	SS15	Total/NA	Solid	8015NM Prep	
890-4659-14	SS16	Total/NA	Solid	8015NM Prep	
MB 880-53469/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53469/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53469/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4659-9 MS	SS11A	Total/NA	Solid	8015NM Prep	
890-4659-9 MSD	SS11A	Total/NA	Solid	8015NM Prep	

Prep Batch: 53485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-15	SS17	Total/NA	Solid	8015NM Prep	
MB 880-53485/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53485/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53485/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28417-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28417-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-15	SS17	Total/NA	Solid	8015B NM	53485
MB 880-53485/1-A	Method Blank	Total/NA	Solid	8015B NM	53485
LCS 880-53485/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53485
LCSD 880-53485/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53485
880-28417-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53485
880-28417-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53485

Analysis Batch: 53580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Total/NA	Solid	8015 NM	
890-4659-2	FS02	Total/NA	Solid	8015 NM	
890-4659-3	FS05A	Total/NA	Solid	8015 NM	
890-4659-4	SS06A	Total/NA	Solid	8015 NM	
890-4659-5	SS07A	Total/NA	Solid	8015 NM	
890-4659-6	SS08A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

GC Semi VOA (Continued)

Analysis Batch: 53580 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-7	SS09A	Total/NA	Solid	8015 NM	
890-4659-8	SS10A	Total/NA	Solid	8015 NM	
890-4659-9	SS11A	Total/NA	Solid	8015 NM	
890-4659-10	SS12A	Total/NA	Solid	8015 NM	
890-4659-11	SS13A	Total/NA	Solid	8015 NM	
890-4659-12	SS14	Total/NA	Solid	8015 NM	
890-4659-13	SS15	Total/NA	Solid	8015 NM	
890-4659-14	SS16	Total/NA	Solid	8015 NM	
890-4659-15	SS17	Total/NA	Solid	8015 NM	

Analysis Batch: 53936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-5	SS07A	Total/NA	Solid	8015B NM	53947
MB 880-53947/1-A	Method Blank	Total/NA	Solid	8015B NM	53947
LCS 880-53947/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53947
LCSD 880-53947/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53947
890-4700-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	53947
890-4700-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53947

Prep Batch: 53947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-5	SS07A	Total/NA	Solid	8015NM Prep	
MB 880-53947/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53947/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53947/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4700-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4700-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 53364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Soluble	Solid	DI Leach	
890-4659-2	FS02	Soluble	Solid	DI Leach	
890-4659-3	FS05A	Soluble	Solid	DI Leach	
890-4659-4	SS06A	Soluble	Solid	DI Leach	
890-4659-5	SS07A	Soluble	Solid	DI Leach	
890-4659-6	SS08A	Soluble	Solid	DI Leach	
890-4659-7	SS09A	Soluble	Solid	DI Leach	
890-4659-8	SS10A	Soluble	Solid	DI Leach	
890-4659-9	SS11A	Soluble	Solid	DI Leach	
890-4659-10	SS12A	Soluble	Solid	DI Leach	
890-4659-11	SS13A	Soluble	Solid	DI Leach	
890-4659-12	SS14	Soluble	Solid	DI Leach	
890-4659-13	SS15	Soluble	Solid	DI Leach	
890-4659-14	SS16	Soluble	Solid	DI Leach	
890-4659-15	SS17	Soluble	Solid	DI Leach	
MB 880-53364/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53364/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53364/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4659-1 MS	FS01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

HPLC/IC (Continued)

Leach Batch: 53364 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1 MSD	FS01	Soluble	Solid	DI Leach	
890-4659-11 MS	SS13A	Soluble	Solid	DI Leach	
890-4659-11 MSD	SS13A	Soluble	Solid	DI Leach	

Analysis Batch: 53574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4659-1	FS01	Soluble	Solid	300.0	53364
890-4659-2	FS02	Soluble	Solid	300.0	53364
890-4659-3	FS05A	Soluble	Solid	300.0	53364
890-4659-4	SS06A	Soluble	Solid	300.0	53364
890-4659-5	SS07A	Soluble	Solid	300.0	53364
890-4659-6	SS08A	Soluble	Solid	300.0	53364
890-4659-7	SS09A	Soluble	Solid	300.0	53364
890-4659-8	SS10A	Soluble	Solid	300.0	53364
890-4659-9	SS11A	Soluble	Solid	300.0	53364
890-4659-10	SS12A	Soluble	Solid	300.0	53364
890-4659-11	SS13A	Soluble	Solid	300.0	53364
890-4659-12	SS14	Soluble	Solid	300.0	53364
890-4659-13	SS15	Soluble	Solid	300.0	53364
890-4659-14	SS16	Soluble	Solid	300.0	53364
890-4659-15	SS17	Soluble	Solid	300.0	53364
MB 880-53364/1-A	Method Blank	Soluble	Solid	300.0	53364
LCS 880-53364/2-A	Lab Control Sample	Soluble	Solid	300.0	53364
LCSD 880-53364/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53364
890-4659-1 MS	FS01	Soluble	Solid	300.0	53364
890-4659-1 MSD	FS01	Soluble	Solid	300.0	53364
890-4659-11 MS	SS13A	Soluble	Solid	300.0	53364
890-4659-11 MSD	SS13A	Soluble	Solid	300.0	53364

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: FS01
Date Collected: 05/12/23 09:25
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 09:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53456	05/16/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 16:42	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 18:16	CH	EET MID

Client Sample ID: FS02
Date Collected: 05/12/23 09:30
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 09:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53456	05/16/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 17:03	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53574	05/17/23 18:32	CH	EET MID

Client Sample ID: FS05A
Date Collected: 05/12/23 09:45
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 09:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53456	05/16/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 17:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 18:38	CH	EET MID

Client Sample ID: SS06A
Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 10:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS06A
Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53456	05/16/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 17:47	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 18:43	CH	EET MID

Client Sample ID: SS07A
Date Collected: 05/12/23 09:55
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 10:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53947	05/23/23 08:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53936	05/23/23 19:53	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 18:48	CH	EET MID

Client Sample ID: SS08A
Date Collected: 05/12/23 10:00
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 10:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53456	05/16/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 18:28	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:04	CH	EET MID

Client Sample ID: SS09A
Date Collected: 05/12/23 10:05
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 11:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53456	05/16/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 18:49	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS09A
Date Collected: 05/12/23 10:05
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:10	CH	EET MID

Client Sample ID: SS10A
Date Collected: 05/12/23 10:10
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 11:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 10:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53456	05/16/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53447	05/16/23 19:09	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:15	CH	EET MID

Client Sample ID: SS11A
Date Collected: 05/12/23 10:15
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 11:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/16/23 20:53	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:21	CH	EET MID

Client Sample ID: SS12A
Date Collected: 05/12/23 10:20
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 12:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/16/23 21:56	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:26	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS13A
Date Collected: 05/12/23 09:25
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 13:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/16/23 22:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:31	CH	EET MID

Client Sample ID: SS14
Date Collected: 05/12/23 09:30
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 13:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/16/23 22:39	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:47	CH	EET MID

Client Sample ID: SS15
Date Collected: 05/12/23 09:45
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 14:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/16/23 22:59	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 19:53	CH	EET MID

Client Sample ID: SS16
Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 14:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Client Sample ID: SS16

Date Collected: 05/12/23 09:50
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			53580	05/17/23 12:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53469	05/16/23 11:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53450	05/16/23 23:20	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 20:09	CH	EET MID

Client Sample ID: SS17

Date Collected: 05/12/23 09:55
Date Received: 05/12/23 13:13

Lab Sample ID: 890-4659-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53496	05/16/23 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53724	05/20/23 15:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53914	05/22/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			53580	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53485	05/16/23 12:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 19:03	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53364	05/15/23 11:46	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53574	05/17/23 20:14	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

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

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-4659-1
SDG: 03D2024167

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4659-1	FS01	Solid	05/12/23 09:25	05/12/23 13:13	0.5'
890-4659-2	FS02	Solid	05/12/23 09:30	05/12/23 13:13	0.5'
890-4659-3	FS05A	Solid	05/12/23 09:45	05/12/23 13:13	1.0'
890-4659-4	SS06A	Solid	05/12/23 09:50	05/12/23 13:13	1.0'
890-4659-5	SS07A	Solid	05/12/23 09:55	05/12/23 13:13	1.0'
890-4659-6	SS08A	Solid	05/12/23 10:00	05/12/23 13:13	1.0'
890-4659-7	SS09A	Solid	05/12/23 10:05	05/12/23 13:13	1.0'
890-4659-8	SS10A	Solid	05/12/23 10:10	05/12/23 13:13	1.0'
890-4659-9	SS11A	Solid	05/12/23 10:15	05/12/23 13:13	1.0'
890-4659-10	SS12A	Solid	05/12/23 10:20	05/12/23 13:13	1.0'
890-4659-11	SS13A	Solid	05/12/23 09:25	05/12/23 13:13	0.5'
890-4659-12	SS14	Solid	05/12/23 09:30	05/12/23 13:13	0.5'
890-4659-13	SS15	Solid	05/12/23 09:45	05/12/23 13:13	1.0'
890-4659-14	SS16	Solid	05/12/23 09:50	05/12/23 13:13	1.0'
890-4659-15	SS17	Solid	05/12/23 09:55	05/12/23 13:13	1.0'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com, kjennings@ensolum.com

Work Order Comments

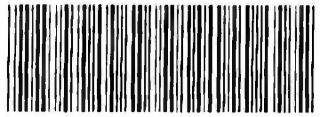
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Cabo Wabo Federal Com 801H	Turn Around	
Project Number:	03D2024167	☑ Routine ☐ Rush	
Project Location:	32.1222, -103.9325	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TNN007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.8	
Total Containers:		Corrected Temperature:	2.6	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS01	Soil	5/12/2023	925	0.5'	Comp	1		x	x	x	
FS02	Soil	5/12/2023	930	0.5'	Comp	1		x	x	x	
SS05A	Soil	5/12/2023	945	1.0'	Comp	1		x	x	x	
SS06A	Soil	5/12/2023	950	1.0'	Comp	1		x	x	x	
SS07A	Soil	5/12/2023	955	1.0'	Comp	1		x	x	x	
SS08A	Soil	5/12/2023	1000	1.0'	Comp	1		x	x	x	
SS09A	Soil	5/12/2023	1005	1.0'	Comp	1		x	x	x	
SS10A	Soil	5/12/2023	1010	1.0'	Comp	1		x	x	x	
SS11A	Soil	5/12/2023	1015	1.0'	Comp	1		x	x	x	
SS12A	Soil	5/12/2023	1020	1.0'	Comp	1		x	x	x	



890-4659 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Peter Van Patten	Amanda Stutz	5/12/23 1313			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com, kjennings@ensolum.com

Work Order Comments

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

Project Name:	Cabo Wabo Federal Com 801H	**Turn Around**	
Project Number:	03D2024167	☑ Routine ☐ Rush	
Project Location:	32.1222, -103.9325	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS13A	Soil	5/12/2023	925	0.5'	Comp	1		x	x	x
SS14	Soil	5/12/2023	930	0.5'	Comp	1		x	x	x
SS15	Soil	5/12/2023	945	1.0'	Comp	1		x	x	x
SS16	Soil	5/12/2023	950	1.0'	Comp	1		x	x	x
SS17	Soil	5/12/2023	955	1.0'	Comp	1		x	x	x

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Peter Van Patten

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Peter Van Patten	Amanda Short	5/12/23 13	3		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4659-1
SDG Number: 03D2024167

Login Number: 4659
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4659-1
SDG Number: 03D2024167

Login Number: 4659
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/15/23 08:35 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/13/2024 12:20:08 PM

JOB DESCRIPTION

Cabo Wabo Federal Com 801H
03D2024167

JOB NUMBER

890-6078-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

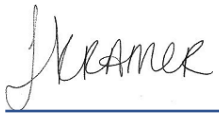
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
2/13/2024 12:20:08 PM

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

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Laboratory Job ID: 890-6078-1
SDG: 03D2024167

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum Job ID: 890-6078-1
Project: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1 Eurofins Carlsbad

Job Narrative
890-6078-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 1/31/2024 11:49 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS18 (890-6078-1), SS19 (890-6078-2), SS20 (890-6078-3), SS21 (890-6078-4), SS22 (890-6078-5), SS23 (890-6078-6) and SS24 (890-6078-7).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS18 (890-6078-1), SS19 (890-6078-2) and SS21 (890-6078-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS20 (890-6078-3), SS22 (890-6078-5) and (890-6078-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 870-17831 and analytical batch 870-17833 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.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-72129 and analytical batch 880-72321 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS18

Lab Sample ID: 890-6078-1
Matrix: Solid
Date Collected: 01/31/24 10:45
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.00401		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 12:15	1
Xylenes, Total	<0.00401	U F2	0.00401		mg/Kg		02/11/24 13:26	02/12/24 12:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*150*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 12:15*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*02/11/24 13:26*	*02/12/24 12:15*	*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			02/12/24 12:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**56.4**		50.3		mg/Kg			02/08/24 09:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.3	U	50.3		mg/Kg		02/02/24 16:37	02/08/24 09:47	1
Diesel Range Organics (Over C10-C28)	**56.4**		50.3		mg/Kg		02/02/24 16:37	02/08/24 09:47	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		02/02/24 16:37	02/08/24 09:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*70 - 130*	*02/02/24 16:37*	*02/08/24 09:47*	*1*
1-Chlorooctane	*89*		*70 - 130*	*02/02/24 16:37*	*02/08/24 09:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**386**		4.96		mg/Kg			02/05/24 14:47	1

Client Sample ID: SS19

Lab Sample ID: 890-6078-2
Matrix: Solid
Date Collected: 01/31/24 10:50
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 12:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 12:42*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/11/24 13:26*	*02/12/24 12:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS19

Lab Sample ID: 890-6078-2
Matrix: Solid
Date Collected: 01/31/24 10:50
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 12:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**97.7**		50.1		mg/Kg			02/08/24 10:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.1	U	50.1		mg/Kg		02/02/24 16:37	02/08/24 10:08	1
Diesel Range Organics (Over C10-C28)	**97.7**		50.1		mg/Kg		02/02/24 16:37	02/08/24 10:08	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/02/24 16:37	02/08/24 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:08*	*1*
1-Chlorooctane	*90*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**380**		5.02		mg/Kg			02/05/24 14:52	1

Client Sample ID: SS20

Lab Sample ID: 890-6078-3
Matrix: Solid
Date Collected: 01/31/24 10:55
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 13:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 13:08*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*02/11/24 13:26*	*02/12/24 13:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 13:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**77.0**		50.2		mg/Kg			02/08/24 10:28	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.2	U	50.2		mg/Kg		02/02/24 16:37	02/08/24 10:28	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS20

Lab Sample ID: 890-6078-3
Matrix: Solid
Date Collected: 01/31/24 10:55
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**77.0**		50.2		mg/Kg		02/02/24 16:37	02/08/24 10:28	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		02/02/24 16:37	02/08/24 10:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:28*	*1*
1-Chlorooctane	*87*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**348**		5.01		mg/Kg			02/05/24 14:57	1

Client Sample ID: SS21

Lab Sample ID: 890-6078-4
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 13:35	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*182*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 13:35*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/11/24 13:26*	*02/12/24 13:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/12/24 13:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**88.6**		50.4		mg/Kg			02/08/24 10:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.4	U	50.4		mg/Kg		02/02/24 16:37	02/08/24 10:49	1
Diesel Range Organics (Over C10-C28)	**88.6**		50.4		mg/Kg		02/02/24 16:37	02/08/24 10:49	1
Oll Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/02/24 16:37	02/08/24 10:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:49*	*1*
1-Chlorooctane	*82*		*70 - 130*	*02/02/24 16:37*	*02/08/24 10:49*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS21

Lab Sample ID: 890-6078-4
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**370**		5.03		mg/Kg			02/05/24 15:02	1

Client Sample ID: SS22

Lab Sample ID: 890-6078-5
Matrix: Solid
Date Collected: 01/31/24 11:05
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 14:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 14:02*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/12/24 14:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**92.2**		49.9		mg/Kg			02/08/24 11:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.9	U	49.9		mg/Kg		02/02/24 16:37	02/08/24 11:09	1
Diesel Range Organics (Over C10-C28)	**92.2**		49.9		mg/Kg		02/02/24 16:37	02/08/24 11:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/02/24 16:37	02/08/24 11:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:09*	*1*
1-Chlorooctane	*90*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**368**		4.99		mg/Kg			02/05/24 15:07	1

Client Sample ID: SS23

Lab Sample ID: 890-6078-6
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS23

Lab Sample ID: 890-6078-6
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:28	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:28*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:28*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 14:28	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**90.3**		50.0		mg/Kg			02/08/24 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0		mg/Kg		02/02/24 16:37	02/08/24 11:30	1
Diesel Range Organics (Over C10-C28)	**90.3**		50.0		mg/Kg		02/02/24 16:37	02/08/24 11:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/24 16:37	02/08/24 11:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:30*	*1*
1-Chlorooctane	*90*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**404**	**F1**	5.02		mg/Kg			02/05/24 15:12	1

Client Sample ID: SS24

Lab Sample ID: 890-6078-7
Matrix: Solid
Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 14:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:55*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*02/11/24 13:26*	*02/12/24 14:55*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS24

Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Lab Sample ID: 890-6078-7

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 14:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**87.6**		49.7		mg/Kg			02/08/24 11:51	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.7	U	49.7		mg/Kg		02/02/24 16:37	02/08/24 11:51	1
Diesel Range Organics (Over C10-C28)	**87.6**		49.7		mg/Kg		02/02/24 16:37	02/08/24 11:51	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		02/02/24 16:37	02/08/24 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:51*	*1*
1-Chlorooctane	*87*		*70 - 130*	*02/02/24 16:37*	*02/08/24 11:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**397**		4.99		mg/Kg			02/05/24 15:32	1

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-6078-1	SS18	150 S1+	115
890-6078-1 MS	SS18	107	79
890-6078-1 MSD	SS18	132 S1+	105
890-6078-2	SS19	142 S1+	96
890-6078-3	SS20	132 S1+	72
890-6078-4	SS21	182 S1+	96
890-6078-5	SS22	132 S1+	93
890-6078-6	SS23	115	82
890-6078-7	SS24	130	99
LCS 880-72819/1-A	Lab Control Sample	124	82
LCSD 880-72819/2-A	Lab Control Sample Dup	128	77
MB 880-72819/5-A	Method Blank	84	109

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH1 (70-130)	1CO1 (70-130)
890-6065-A-1-I MS	Matrix Spike	76	79
890-6065-A-1-J MSD	Matrix Spike Duplicate	72	75
890-6078-1	SS18	93	89
890-6078-2	SS19	98	90
890-6078-3	SS20	92	87
890-6078-4	SS21	88	82
890-6078-5	SS22	98	90
890-6078-6	SS23	97	90
890-6078-7	SS24	93	87
LCS 870-17831/1-A	Lab Control Sample	102	107
LCSD 870-17831/2-A	Lab Control Sample Dup	101	107
MB 870-17831/3-A	Method Blank	106	102

Surrogate Legend

OTPH = o-Terphenyl
1CO = 1-Chlorooctane

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72819/5-A
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72819

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 11:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/11/24 13:26	02/12/24 11:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*02/11/24 13:26*	*02/12/24 11:49*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*02/11/24 13:26*	*02/12/24 11:49*	*1*

Lab Sample ID: LCS 880-72819/1-A
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72819

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09323		mg/Kg		93	70 - 130		
Toluene			0.100	0.1125		mg/Kg		113	70 - 130		
Ethylbenzene			0.100	0.1134		mg/Kg		113	70 - 130		
m-Xylene & p-Xylene			0.200	0.2559		mg/Kg		128	70 - 130		
o-Xylene			0.100	0.1187		mg/Kg		119	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

Lab Sample ID: LCSD 880-72819/2-A
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72819

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08552		mg/Kg		86	70 - 130	9	35
Toluene			0.100	0.09515		mg/Kg		95	70 - 130	17	35
Ethylbenzene			0.100	0.1075		mg/Kg		108	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2537		mg/Kg		127	70 - 130	1	35
o-Xylene			0.100	0.1023		mg/Kg		102	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*

Lab Sample ID: 890-6078-1 MS
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: SS18
Prep Type: Total/NA
Prep Batch: 72819

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0996	0.09774		mg/Kg		98	70 - 130		
Toluene	<0.00200	U	0.0996	0.09090		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

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

Lab Sample ID: 890-6078-1 MS
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: SS18
Prep Type: Total/NA
Prep Batch: 72819

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0996	0.08805		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.2238		mg/Kg		112	70 - 130
o-Xylene	<0.00200	U	0.0996	0.09037		mg/Kg		91	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 890-6078-1 MSD
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: SS18
Prep Type: Total/NA
Prep Batch: 72819

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.09057		mg/Kg		91	70 - 130	8	35
Toluene	<0.00200	U	0.0990	0.09825		mg/Kg		99	70 - 130	8	35
Ethylbenzene	<0.00200	U	0.0990	0.09332		mg/Kg		94	70 - 130	6	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.198	0.2400		mg/Kg		121	70 - 130	7	35
o-Xylene	<0.00200	U	0.0990	0.1040		mg/Kg		105	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 870-17831/3-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17831

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		02/02/24 16:37	02/08/24 03:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/02/24 16:37	02/08/24 03:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/02/24 16:37	02/08/24 03:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*106*		*70 - 130*	*02/02/24 16:37*	*02/08/24 03:55*	*1*
1-Chlorooctane	*102*		*70 - 130*	*02/02/24 16:37*	*02/08/24 03:55*	*1*

Lab Sample ID: LCS 870-17831/1-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)	1020	773.6		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	1010	960.6		mg/Kg		95	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

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

Lab Sample ID: LCS 870-17831/1-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17831

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	102		70 - 130
1-Chlorooctane	107		70 - 130

Lab Sample ID: LCSD 870-17831/2-A
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17831

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)			1020	776.7		mg/Kg		76	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1010	969.3		mg/Kg		96	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	101		70 - 130
1-Chlorooctane	107		70 - 130

Lab Sample ID: 890-6065-A-1-I MS
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 17831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)	<49.8	U F1	1020	620.6	F1	mg/Kg		61	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U F1	1010	735.9	F1	mg/Kg		69	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl	76		70 - 130
1-Chlorooctane	79		70 - 130

Lab Sample ID: 890-6065-A-1-J MSD
Matrix: Solid
Analysis Batch: 17833

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 17831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)	<49.8	U F1	1020	650.7	F1	mg/Kg		64	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	1010	696.1	F1	mg/Kg		65	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	72		70 - 130
1-Chlorooctane	75		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-72129/1-A
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/05/24 13:43	1

Lab Sample ID: LCS 880-72129/2-A
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	244.2		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-72129/3-A
Matrix: Solid
Analysis Batch: 72321

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	244.2		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-6078-6 MS
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: SS23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	404	F1	251	625.8	F1	mg/Kg		88	90 - 110		

Lab Sample ID: 890-6078-6 MSD
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: SS23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	404	F1	251	640.5		mg/Kg		94	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

GC VOA

Prep Batch: 72819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	5035	
890-6078-2	SS19	Total/NA	Solid	5035	
890-6078-3	SS20	Total/NA	Solid	5035	
890-6078-4	SS21	Total/NA	Solid	5035	
890-6078-5	SS22	Total/NA	Solid	5035	
890-6078-6	SS23	Total/NA	Solid	5035	
890-6078-7	SS24	Total/NA	Solid	5035	
MB 880-72819/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72819/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72819/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6078-1 MS	SS18	Total/NA	Solid	5035	
890-6078-1 MSD	SS18	Total/NA	Solid	5035	

Analysis Batch: 72833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8021B	72819
890-6078-2	SS19	Total/NA	Solid	8021B	72819
890-6078-3	SS20	Total/NA	Solid	8021B	72819
890-6078-4	SS21	Total/NA	Solid	8021B	72819
890-6078-5	SS22	Total/NA	Solid	8021B	72819
890-6078-6	SS23	Total/NA	Solid	8021B	72819
890-6078-7	SS24	Total/NA	Solid	8021B	72819
MB 880-72819/5-A	Method Blank	Total/NA	Solid	8021B	72819
LCS 880-72819/1-A	Lab Control Sample	Total/NA	Solid	8021B	72819
LCSD 880-72819/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72819
890-6078-1 MS	SS18	Total/NA	Solid	8021B	72819
890-6078-1 MSD	SS18	Total/NA	Solid	8021B	72819

Analysis Batch: 73047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	Total BTEX	
890-6078-2	SS19	Total/NA	Solid	Total BTEX	
890-6078-3	SS20	Total/NA	Solid	Total BTEX	
890-6078-4	SS21	Total/NA	Solid	Total BTEX	
890-6078-5	SS22	Total/NA	Solid	Total BTEX	
890-6078-6	SS23	Total/NA	Solid	Total BTEX	
890-6078-7	SS24	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8015NM Prep	
890-6078-2	SS19	Total/NA	Solid	8015NM Prep	
890-6078-3	SS20	Total/NA	Solid	8015NM Prep	
890-6078-4	SS21	Total/NA	Solid	8015NM Prep	
890-6078-5	SS22	Total/NA	Solid	8015NM Prep	
890-6078-6	SS23	Total/NA	Solid	8015NM Prep	
890-6078-7	SS24	Total/NA	Solid	8015NM Prep	
MB 870-17831/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17831/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

GC Semi VOA (Continued)

Prep Batch: 17831 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 870-17831/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6065-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6065-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8015B NM	17831
890-6078-2	SS19	Total/NA	Solid	8015B NM	17831
890-6078-3	SS20	Total/NA	Solid	8015B NM	17831
890-6078-4	SS21	Total/NA	Solid	8015B NM	17831
890-6078-5	SS22	Total/NA	Solid	8015B NM	17831
890-6078-6	SS23	Total/NA	Solid	8015B NM	17831
890-6078-7	SS24	Total/NA	Solid	8015B NM	17831
MB 870-17831/3-A	Method Blank	Total/NA	Solid	8015B NM	17831
LCS 870-17831/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17831
LCSD 870-17831/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17831
890-6065-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	17831
890-6065-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17831

Analysis Batch: 17893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Total/NA	Solid	8015 NM	
890-6078-2	SS19	Total/NA	Solid	8015 NM	
890-6078-3	SS20	Total/NA	Solid	8015 NM	
890-6078-4	SS21	Total/NA	Solid	8015 NM	
890-6078-5	SS22	Total/NA	Solid	8015 NM	
890-6078-6	SS23	Total/NA	Solid	8015 NM	
890-6078-7	SS24	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 72129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Soluble	Solid	DI Leach	
890-6078-2	SS19	Soluble	Solid	DI Leach	
890-6078-3	SS20	Soluble	Solid	DI Leach	
890-6078-4	SS21	Soluble	Solid	DI Leach	
890-6078-5	SS22	Soluble	Solid	DI Leach	
890-6078-6	SS23	Soluble	Solid	DI Leach	
890-6078-7	SS24	Soluble	Solid	DI Leach	
MB 880-72129/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72129/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72129/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6078-6 MS	SS23	Soluble	Solid	DI Leach	
890-6078-6 MSD	SS23	Soluble	Solid	DI Leach	

Analysis Batch: 72321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-1	SS18	Soluble	Solid	300.0	72129
890-6078-2	SS19	Soluble	Solid	300.0	72129
890-6078-3	SS20	Soluble	Solid	300.0	72129

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

HPLC/IC (Continued)

Analysis Batch: 72321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6078-4	SS21	Soluble	Solid	300.0	72129
890-6078-5	SS22	Soluble	Solid	300.0	72129
890-6078-6	SS23	Soluble	Solid	300.0	72129
890-6078-7	SS24	Soluble	Solid	300.0	72129
MB 880-72129/1-A	Method Blank	Soluble	Solid	300.0	72129
LCS 880-72129/2-A	Lab Control Sample	Soluble	Solid	300.0	72129
LCSD 880-72129/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72129
890-6078-6 MS	SS23	Soluble	Solid	300.0	72129
890-6078-6 MSD	SS23	Soluble	Solid	300.0	72129

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS18

Lab Sample ID: 890-6078-1

Date Collected: 01/31/24 10:45
Matrix: Solid
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 12:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 12:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 09:47	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 09:47	WP	EET DAL
Soluble	Leach	DI Leach			5.04 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 14:47	CH	EET MID

Client Sample ID: SS19

Lab Sample ID: 890-6078-2

Date Collected: 01/31/24 10:50
Matrix: Solid
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 12:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 12:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 10:08	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 10:08	WP	EET DAL
Soluble	Leach	DI Leach			4.98 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 14:52	CH	EET MID

Client Sample ID: SS20

Lab Sample ID: 890-6078-3

Date Collected: 01/31/24 10:55
Matrix: Solid
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 13:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 13:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 10:28	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 10:28	WP	EET DAL
Soluble	Leach	DI Leach			4.99 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 14:57	CH	EET MID

Client Sample ID: SS21

Lab Sample ID: 890-6078-4

Date Collected: 01/31/24 11:00
Matrix: Solid
Date Received: 01/31/24 11:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 13:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 13:35	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS21

Date Collected: 01/31/24 11:00
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			17893	02/08/24 10:49	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 10:49	WP	EET DAL
Soluble	Leach	DI Leach			4.97 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:02	CH	EET MID

Client Sample ID: SS22

Date Collected: 01/31/24 11:05
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 14:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 14:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 11:09	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 11:09	WP	EET DAL
Soluble	Leach	DI Leach			5.01 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:07	CH	EET MID

Client Sample ID: SS23

Date Collected: 01/31/24 11:10
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 14:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 14:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 11:30	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 11:30	WP	EET DAL
Soluble	Leach	DI Leach			4.98 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:12	CH	EET MID

Client Sample ID: SS24

Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 14:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73047	02/12/24 14:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			17893	02/08/24 11:51	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	17831	02/02/24 16:37	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 11:51	WP	EET DAL

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Client Sample ID: SS24

Date Collected: 01/31/24 11:15
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6078-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:32	CH	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Laboratory: Eurofins Dallas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704295-23-34	06-30-24

Laboratory: Eurofins Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

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 DAL
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET DAL
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Sample Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal Com 801H

Job ID: 890-6078-1
SDG: 03D2024167

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6078-1	SS18	Solid	01/31/24 10:45	01/31/24 11:49	0.25'
890-6078-2	SS19	Solid	01/31/24 10:50	01/31/24 11:49	0.25'
890-6078-3	SS20	Solid	01/31/24 10:55	01/31/24 11:49	0.25'
890-6078-4	SS21	Solid	01/31/24 11:00	01/31/24 11:49	0.25'
890-6078-5	SS22	Solid	01/31/24 11:05	01/31/24 11:49	0.25'
890-6078-6	SS23	Solid	01/31/24 11:10	01/31/24 11:49	0.25'
890-6078-7	SS24	Solid	01/31/24 11:15	01/31/24 11:49	0.25'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: 6078

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	601 N. Marienfeld St. #400	Address:	
City, State ZIP:	Midland, TX 79701	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	Cabo Wabo Federal Com 801H	Turn Around	☑ Routine ☐ Rush
Project Number:	030C024167	Due Date:	
Project Location:	32.1722, -103.9325	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	tpraven
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.0
Total Containers:		Corrected Temperature:	1.8

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH	BTEX	Chlorides	Sample Comments
SS18	Soil	1-31-24	1045	0.25	Comp	1		X	X	X	
SS19			1050								
SS20			1055								
SS21			1100								
SS22			1105								
SS23			1110								
SS24			1115								

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten		11:49 1/31	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Phone: 432-704-5440

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 880-9114.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-6078-1
Address: 9701 Harry Hines Blvd, ,	Due Date Requested: 2/6/2024			
City: Dallas	TAT Requested (days):			
State, Zip: TX, 75220				
Phone: 214-902-0300(Tel)	PO #:			
Email:	WO #:			
Project Name: Cabo Wabo Federal Com 801H	Project #: 89000145			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_Calc	8015MOD_NM/8015NM_S_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SS18 (890-6078-1)	1/31/24	10:45 Mountain		Solid			X	X	1	
SS19 (890-6078-2)	1/31/24	10:50 Mountain		Solid			X	X	1	
SS20 (890-6078-3)	1/31/24	10:55 Mountain		Solid			X	X	1	
SS21 (890-6078-4)	1/31/24	11:00 Mountain		Solid			X	X	1	
SS22 (890-6078-5)	1/31/24	11:05 Mountain		Solid			X	X	1	
SS23 (890-6078-6)	1/31/24	11:10 Mountain		Solid			X	X	1	
SS24 (890-6078-7)	1/31/24	11:15 Mountain		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: AJ	Date/Time:	Company	Received by: FedEx	Date/Time:	Company
Relinquished by: FedEx	Date/Time: 2/6/24 957	Company	Received by: MS	Date/Time: 2/6/24 957	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: THM001 1.6 -4

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6078-1
SDG Number: 03D2024167

Login Number: 6078
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6078-1
SDG Number: 03D2024167

Login Number: 6078
List Number: 3
Creator: Sharp, Michael

List Source: Eurofins Dallas
List Creation: 02/06/24 10:39 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6078-1
SDG Number: 03D2024167

Login Number: 6078
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/01/24 11:02 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/5/2024 12:45:14 PM

JOB DESCRIPTION

Cabo Wabo Federl Com 801H
Eddy County

JOB NUMBER

880-40020-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

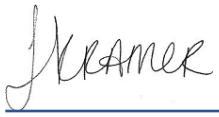
Eurofins Midland

Job Notes

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

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

Authorization



Generated
3/5/2024 12:45:14 PM

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

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Laboratory Job ID: 880-40020-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-40020-1
Project/Site: Cabo Wabo Federl Com 801H SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum Job ID: 880-40020-1
Project: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1 Eurofins Midland

Job Narrative
880-40020-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 2/27/2024 4:47 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C.

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SW01 (880-40020-1).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-74453 recovered under the lower control limit for Benzene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-74452 and analytical batch 880-74453 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 8021B: Surrogate recovery for the following sample was outside control limits: SW01 (880-40020-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The method blank for preparation batch 880-74452 and 880-74472 and analytical batch 880-74453 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

GC Semi VOA
Method TX_1005: The surrogate recovery for the blank associated with preparation batch 880-74530 and analytical batch 880-74564 was outside the upper control limits.

Method TX_1005: The method blank for preparation batch 880-74530 and analytical batch 880-74564 contained C6-C12 Range Hydrocarbons above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method TX_1005: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-74530 and analytical batch 880-74564 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.

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-74240 and analytical batch 880-74484 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

Case Narrative

Client: Ensolum Job ID: 880-40020-1
Project: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1 (Continued) Eurofins Midland

within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Client Sample ID: SW01

Date Collected: 02/27/24 12:00
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

Lab Sample ID: 880-40020-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.000709**	**J B**	0.00200	0.000386	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		03/01/24 08:42	03/03/24 04:06	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		03/01/24 08:42	03/03/24 04:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*03/01/24 08:42*	*03/03/24 04:06*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*03/01/24 08:42*	*03/03/24 04:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	0.00101	mg/Kg			03/03/24 04:06	1

Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	**35.1**	**J B**	50.5	15.2	mg/Kg		03/03/24 00:37	03/04/24 14:50	1
>C12-C28 Range Hydrocarbons	**26.5**		50.5	15.2	mg/Kg		03/03/24 00:37	03/04/24 14:50	1
>C28-C35 Range Hydrocarbons	<50.5	U	50.5	15.2	mg/Kg		03/03/24 00:37	03/04/24 14:50	1
Total Petroleum Hydrocarbons (C6-C35)	**61.6**		50.5	15.2	mg/Kg			03/04/24 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*101*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:50*	*1*
o-Terphenyl (Surr)	*104*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**353**		5.03	0.397	mg/Kg			03/03/24 16:47	1

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

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)										
880-40020-1	SW01	82	67 S1-										
LCS 880-74452/1-A	Lab Control Sample	124	102										
LCSD 880-74452/2-A	Lab Control Sample Dup	111	117										
MB 880-74452/5-A	Method Blank	73	91										
MB 880-74472/5-A	Method Blank	78	84										

Surrogate Legend

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

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO	OTPH										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-40020-1	SW01	101	104										
LCS 880-74530/2-A	Lab Control Sample	102	110										
LCSD 880-74530/3-A	Lab Control Sample Dup	101	113										
MB 880-74530/1-A	Method Blank	123	142 S1+										

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-74452/5-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74452

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0007257	J	0.00200	0.000385	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		03/01/24 08:42	03/02/24 20:50	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 08:42	03/02/24 20:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*03/01/24 08:42*	*03/02/24 20:50*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*03/01/24 08:42*	*03/02/24 20:50*	*1*

Lab Sample ID: LCS 880-74452/1-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09161		mg/Kg		92	70 - 130
Toluene	0.100	0.09911		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1253		mg/Kg		125	70 - 130
m-Xylene & p-Xylene	0.200	0.2501		mg/Kg		125	70 - 130
o-Xylene	0.100	0.1258		mg/Kg		126	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-74452/2-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74452

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08061		mg/Kg		81	70 - 130	13	35
Toluene	0.100	0.1001		mg/Kg		100	70 - 130	1	35
Ethylbenzene	0.100	0.1084		mg/Kg		108	70 - 130	14	35
m-Xylene & p-Xylene	0.200	0.2175		mg/Kg		109	70 - 130	14	35
o-Xylene	0.100	0.1087		mg/Kg		109	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: MB 880-74472/5-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74472

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0007213	J	0.00200	0.000385	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		03/01/24 11:44	03/02/24 09:39	1

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

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

Lab Sample ID: MB 880-74472/5-A
Matrix: Solid
Analysis Batch: 74453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74472

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		03/01/24 11:44	03/02/24 09:39	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		03/01/24 11:44	03/02/24 09:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*03/01/24 11:44*	*03/02/24 09:39*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*03/01/24 11:44*	*03/02/24 09:39*	*1*

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Lab Sample ID: MB 880-74530/1-A
Matrix: Solid
Analysis Batch: 74564

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74530

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	23.62	J	50.0	15.0	mg/Kg		03/03/24 00:37	03/04/24 09:03	1
>C12-C28 Range Hydrocarbons	<50.0	U	50.0	15.0	mg/Kg		03/03/24 00:37	03/04/24 09:03	1
>C28-C35 Range Hydrocarbons	<50.0	U	50.0	15.0	mg/Kg		03/03/24 00:37	03/04/24 09:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*123*		*70 - 130*	*03/03/24 00:37*	*03/04/24 09:03*	*1*
o-Terphenyl (Surr)	*142*	*S1+*	*70 - 130*	*03/03/24 00:37*	*03/04/24 09:03*	*1*

Lab Sample ID: LCS 880-74530/2-A
Matrix: Solid
Analysis Batch: 74564

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74530

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C6-C12 Range Hydrocarbons	1000	1011		mg/Kg		101	75 - 125
>C12-C28 Range Hydrocarbons	1000	935.4		mg/Kg		94	75 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*102*		*70 - 130*
o-Terphenyl (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-74530/3-A
Matrix: Solid
Analysis Batch: 74564

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74530

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6-C12 Range Hydrocarbons	1000	1037		mg/Kg		104	75 - 125	3	25
>C12-C28 Range Hydrocarbons	1000	992.8		mg/Kg		99	75 - 125	6	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*101*		*70 - 130*
o-Terphenyl (Surr)	*113*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-74240/1-A
Matrix: Solid
Analysis Batch: 74484

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.395	mg/Kg			03/03/24 12:20	1

Lab Sample ID: LCS 880-74240/2-A
Matrix: Solid
Analysis Batch: 74484

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.9		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-74240/3-A
Matrix: Solid
Analysis Batch: 74484

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	252.5		mg/Kg		101	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

GC VOA

Prep Batch: 74452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	5035	
MB 880-74452/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-74452/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-74452/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 74453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	8021B	74452
MB 880-74452/5-A	Method Blank	Total/NA	Solid	8021B	74452
MB 880-74472/5-A	Method Blank	Total/NA	Solid	8021B	74472
LCS 880-74452/1-A	Lab Control Sample	Total/NA	Solid	8021B	74452
LCSD 880-74452/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	74452

Prep Batch: 74472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-74472/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 74726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 74530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	TX_1005_S_Prep	
MB 880-74530/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Prep	
LCS 880-74530/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Prep	
LCSD 880-74530/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Prep	

Analysis Batch: 74564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	TX 1005	74530
MB 880-74530/1-A	Method Blank	Total/NA	Solid	TX 1005	74530
LCS 880-74530/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	74530
LCSD 880-74530/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	74530

Analysis Batch: 74800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Total/NA	Solid	TX 1005	

HPLC/IC

Leach Batch: 74240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Soluble	Solid	DI Leach	
MB 880-74240/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-74240/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-74240/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

HPLC/IC

Analysis Batch: 74484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40020-1	SW01	Soluble	Solid	300.0	74240
MB 880-74240/1-A	Method Blank	Soluble	Solid	300.0	74240
LCS 880-74240/2-A	Lab Control Sample	Soluble	Solid	300.0	74240
LCSD 880-74240/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	74240

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Client Sample ID: SW01

Date Collected: 02/27/24 12:00
Date Received: 02/27/24 16:47

Lab Sample ID: 880-40020-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			74452	EL	EET MID	03/01/24 08:42
Total/NA	Analysis	8021B		1	74453	MNR	EET MID	03/03/24 04:06
Total/NA	Analysis	Total BTEX		1	74726	SM	EET MID	03/03/24 04:06
Total/NA	Prep	TX_1005_S_Prep			74530	TKC	EET MID	03/03/24 00:37
Total/NA	Analysis	TX 1005		1	74564	SM	EET MID	03/04/24 14:50
Total/NA	Analysis	TX 1005		1	74800	SM	EET MID	03/04/24 14:50
Soluble	Leach	DI Leach			74240	SMC	EET MID	02/28/24 10:03
Soluble	Analysis	300.0		1	74484	CH	EET MID	03/03/24 16:47

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Laboratory: Eurofins Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
TX 1005	Texas - Total Petroleum Hydrocarbon (GC)	TCEQ	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
TX_1005_S_Prep	Extraction - Texas Total petroleum Hyrdocarbons	TCEQ	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

TCEQ = Texas Commission of Environmental Quality

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl Com 801H

Job ID: 880-40020-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-40020-1	SW01	Solid	02/27/24 12:00	02/27/24 16:47	0-0.5'

eurofins | Environment Testing Xenco

Chain of Custody

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

880-40020 Chain of Custody

Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum, LLC	Company Name:	
Address:	601 N Marienfeld St Ste 400	Address:	
City, State ZIP:	Midland, TX 79701	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	Cabo Wabo Federal Com 801H	Turn Around	
Project Number:	03D2024167	☑ Routine ☐ Rush	
Project Location:	Eddy County	Due Date:	
Sampler's Name:	Tabitha Guardian	TAT starts the day received by the lab, if received by 4:30pm	
PO #	03D2024167		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR8
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-1.0
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	0.6
Total Containers:		Corrected Temperature:	0.5

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX 8021B	Chlorides 300	TPH 1005
SW01	S	2/27/24	1200	0-0.5'	C	1		X	X	X

NFE

2/29/24

TNG

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2SO_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ NaSO 3
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		02-27-24	2		
3		16:47	4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-40020-1
SDG Number: Eddy County

Login Number: 40020
List Number: 1
Creator: Wheeler, Jazmine

List Source: Eurofins Midland

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 3/13/2023)
Date: Wednesday, March 8, 2023 5:12:27 PM

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, March 8, 2023 1:52 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 3/13/2023)

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

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following site the week of March 13, 2023.

- Red Bull 35 Federal 001/ NAPP2126444907
- Cabo Wabo Federal Com 801H / NAPP2303047441 & NAPP304550164
- Baseball Cap #25H / NAPP2303037207

Thank you,

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 4/3/2023)
Date: Friday, March 31, 2023 9:07:24 AM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, March 30, 2023 8:57 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - 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,

ConocoPhillips Company (COP) plans to complete sampling activities at the following site the week of April 3, 2023.

- Tusk Federal 004H / NAPP2303742113
  - Sampling Date: 4/3/2023 @ 10:00 AM MST
- Cabo Wabo Federal Com 801H / NAPP2303047441 and NAPP2304550164

- Sampling Date: 4/5-6/2023 @ 8:00 AM MST

Thank you,

Hadlie Green
Project Manager
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

From: Enviro, OCD, EMNRD
To: Hadlie Green
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 5/8/2023)
Date: Monday, May 8, 2023 2:54:01 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, May 5, 2023 2:40 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 5/8/2023)

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

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following sites the week of May 8, 2023.

- Cabo Wabo Federal Com 801H and Cabo Wabo Federal Com 704-706 / NAPP2301933240 and NAPP2304550164
  - Sampling Date: 5/12/2023 @ 10:00 AM MST

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

From: Hamlet, Robert, EMNRD
To: Hadlie Green
Cc: Kalei Jennings; Carlile, Justin; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: (Extension Approval) COG - Cabo Wabo Federal Com 801H (Incident Number NAPP2304550164)
Date: Wednesday, April 19, 2023 7:55:10 AM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2304550164**

Hadlie,

Your request for an extension to **July 27th, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Tuesday, April 18, 2023 11:48 AM
To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Subject: FW: [EXTERNAL] COG - Extension Request - Cabo Wabo Federal Com 801H (Incident Number NAPP2304550164)

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Tuesday, April 18, 2023 6:19 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>; Carlile, Justin <Justin.Carlile@conocophillips.com>
Subject: [EXTERNAL] COG - Extension Request - Cabo Wabo Federal Com 801H (Incident Number NAPP2304550164)

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

To Whom It May Concern,

Cabo Wabo Federal Com 801H (Incident Number NAPP2304550164)
COG Operating, LLC (COG) is requesting an extension for the current deadline of April 28, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Cabo Wabo Federal Com 801H (Incident Number NAPP2304550164). The release was discovered on January 28, 2023. Fluids were released into containment and onto pad. Initial assessment of the release has been completed, however; remediation activities could not be completed due to ongoing frac operations onsite. COG operations will provide status updates and will indicate when the Site is clear and remediation activities can commence. In order to complete additional remediation activities and submit a remediation work plan or closure report, COG requests a 90-day extension of this deadline until July 27, 2023.

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

ENSOLUM

APPENDIX F

FINAL C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	NAPP2304550164
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Justin Carlile	Contact Telephone	(432) 202-4112
Contact email	Justin.Carlile@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2304550164
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.1222 Longitude -103.9325
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Cabo Wabo Federal Com 801H	Site Type	Tank Battery
Date Release Discovered	January 28, 2023	API# *(if applicable)*	N/A

Unit Letter	Section	Township	Range	County
A	24	25S	29E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 9.0594	Volume Recovered (bbls) 9
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a tank malfunction.
The release was within secondary containment and also on the pad. A vacuum truck was dispatched to remove all freestanding fluids.
Evaluation will be made of the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	NAPP2304550164
Application ID	

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

Initial Response

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

- ■ The source of the release has been stopped.
- ■ The impacted area has been secured to protect human health and the environment.
- ■ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ■ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 2/14/2023

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Jocelyn Harimon Date: 02/14/2023

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 186196

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 186196
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	2/16/2023

Incident ID	NAPP2304550164
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2304550164
District RP	
Facility ID	
Application ID	

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

Printed Name: ___Justin Carlile_____ Title: __Senior Environmental Engineer_____

Signature: Justin Carlile Date: __07/03/2023_____

email: __Justin.Carlile@conocophillips.com_____ Telephone: ___(432)202-4112_____

OCD Only

Received by: Shelly Wells Date: 7/11/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2304550164
District RP	
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Justin Carlile Title: Senior Environmental Engineer

Signature: Justin Carlile Date: 07/03/2023

email: Justin.Carlile@conocophillips.com Telephone: (432)202-4112

OCD Only

Received by: Shelly Wells Date: 7/11/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 386043

QUESTIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 386043
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2304550164**
Incident Name	**NAPP2304550164 CABO WABO FEDERAL COM 801H @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	CABO WABO FEDERAL COM 801H
Date Release Discovered	01/28/2023
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Tank (Any) | Produced Water | Released: 9 BBL | Recovered: 9 BBL | Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 386043
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 09/24/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 386043
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	None
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	Yes
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	01/31/2024
On what date will (or did) the final sampling or liner inspection occur	01/31/2024
On what date will (or was) the remediation complete(d)	02/24/2024
What is the estimated surface area (in square feet) that will be remediated	363
What is the estimated volume (in cubic yards) that will be remediated	7
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 386043
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
Is (or was) there affected material present needing to be removed	Yes
Is (or was) there a power wash of the lined containment area (to be) performed	No
OTHER (Non-listed remedial process)	No
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 09/24/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 386043
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Liner Inspection Information	
Last liner inspection notification (C-141L) recorded	***{Unavailable.}***
Was all the impacted materials removed from the liner	*Unavailable.*

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**Yes**
What was the total surface area (in square feet) remediated	363
What was the total volume (cubic yards) remediated	7
Summarize any additional remediation activities not included by answers (above)	excavation of impacted soil has been protective of human health, the environment, and groundwater. Confirmed depth to groundwater greater than 100 feet below ground surface.

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 (in .pdf format) 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.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 09/24/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 386043

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	Action Number: 386043
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2304550164 CABO WABO FEDERAL COM 801H, thank you. This Remediation Closure Report is approved.	10/23/2024