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: _____

L48 Spill Volume Estimate Form

Facility Name & Number:	Alamo Maroon Core / Cabo Wabo Fed Com 704H, 705H, 706H
Asset Area:	Deleware Basin West
Release Discovery Date & Time:	1/5/2023
Release Type:	Produced Water
Provide any known details about the event:	Produced Water/Frac Fluids

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	12.0	36.0	0.25	3	432.000	0.007	0.534	0.000	0.534
Rectangle B	48.0	60.0	0.25	2	2880.000	0.010	5.340	0.001	5.343
Rectangle C	36.0	33.0	0.25	3	1188.000	0.007	1.469	0.000	1.469
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
								Total Volume Release:	7.346

L48 Spill Volume Estimate Form

Facility Name & Number:	Alamo Maroon Core / Cabo Wabo Fed Com 704-706H
Asset Area:	Deleware Basin West
Release Discovery Date & Time:	1/5/23 01:30am
Release Type:	Produced Water
Provide any known details about the event:	Produced Water/Frac Fluids

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	56.0	2.0	0.25	3	112.000	0.007	0.138	0.000	0.138
Rectangle B	56.0	2.0	0.25	3	112.000	0.007	0.138	0.000	0.138
Rectangle C	52.0	3.0	0.25	3	156.000	0.007	0.193	0.000	0.193
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
								Total Volume Release:	0.470

ENSOLUM

March 21, 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 24 B CTB
Incident Number NAPP2301933240
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 additional soil sampling activities performed at the Cabo Wabo Federal 24 B CTB (Site), in response to the denial of the original *Closure Request*, dated June 29, 2023.

On December 26, 2023, the New Mexico Oil Conservation Division (NMOCD) denied the original *Closure Request* for the following reasons:

- *The Remediation Closure Report is Denied. The OCD requires an accurate scaled site map diagram with sample points clearly marked. Site photos are outdated and show pasture instead of the actual active well pad. Please, include photos of the actual well pad. When equipment is located in and around the release area, samples must come from the sidewalls of the release area excavation. The OCD needs to know if the release went in, around, or under equipment/tanks. Not having sidewall samples from the actual excavation won't give us those sampling data points that we need. "Step-out" samples should only be taken a maximum of 1-2 feet off the observed edge of the release area. "Step-out" samples should never be conducted if equipment is in the vicinity of the release area. Please conduct sidewalls in the release area excavation. Please make sure that the edge of the release extent is accurately defined. The work will need to occur in 90 days after the report has been reviewed.*

Based on laboratory analytical results from the additional soil sampling activities, COG is submitting this *Closure Request Addendum,* and requesting closure for Incident Number NAPP2301933240.

Details regarding the release, Site characterization, and previous excavation and soil sampling activities can be referenced in the original June 29, 2023, *Closure Request*. The June 29, 2023, *Closure Request* is included as an attachment to this report.

BACKGROUND

The Site is located in Unit C, Section 24, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.1222°, -103.9408°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On January 5, 2023, corrosion on a flowback tank resulted in the release of approximately 7.816 barrels (bbls) of produced water onto the surrounding well pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 7 bbls of released produced water were recovered. COG reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on January 19, 2023. The release was assigned Incident Number NAPP2301933240.

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). Based on the results of the Site Characterization, as described in the June 29, 2023, *Closure Request*, 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

SOIL SAMPLING ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

In response to the NMOCD denial, Ensolum personnel returned to the Site on January 31, 2024, and February 27, 2024, to complete additional soil sampling activities. Eleven additional assessment soil samples (SS13 through SS23) were collected around the release extent at a depth of approximately 0.25 feet bgs to further confirm the lateral extent of the release. 5-point composite samples SW01 through SW04 were collected every 200 square feet from the sidewalls of the backfilled excavation. The sidewall samples were collected via hand auger at depths ranging from the ground surface to 0.5 feet bgs. 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.

The assessment and excavation 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 and Figure 3. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix A.

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 samples SS13 through SS23 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and further confirmed the lateral extent of the release. Laboratory analytical results for excavation sidewall soil samples SW01 through SW04 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and further confirmed successful removal of the impacted soil. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix B.

The excavation measured approximately 1,950 square feet in areal extent. A total of approximately 40 cubic yards of impacted soil was excavated, transported, and properly disposed at R360 Environmental Solutions in Hobbs, New Mexico.

CLOSURE REQUEST

In response to the NMOCD denial of the June 29, 2023, *Closure Request*, additional soil sampling activities were conducted at the Site to further assess for the presence or absence of impacted soil resulting from the January 5, 2023, release of produced water. Laboratory analytical results or the assessment soil samples, collected around the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and further confirmed the lateral extent of the release. Laboratory analytical results for the excavation sidewall samples indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and further confirmed successful removal of the impacted soil. Based on laboratory analytical results, impacted soil exceeding the Site Closure Criteria has been excavated and no further remediation is required at this time. However, soil on the well pad exceeding the reclamation requirements of NMAC 19.15.29.13.D (1) will be removed during plugging and abandonment of the wells and final reclamation of the well pad.

Initial response activities 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 NAPP2301933240.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Aimee Cole
Senior Managing Scientist

cc: 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	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	June 29, 2023, *Closure Request*

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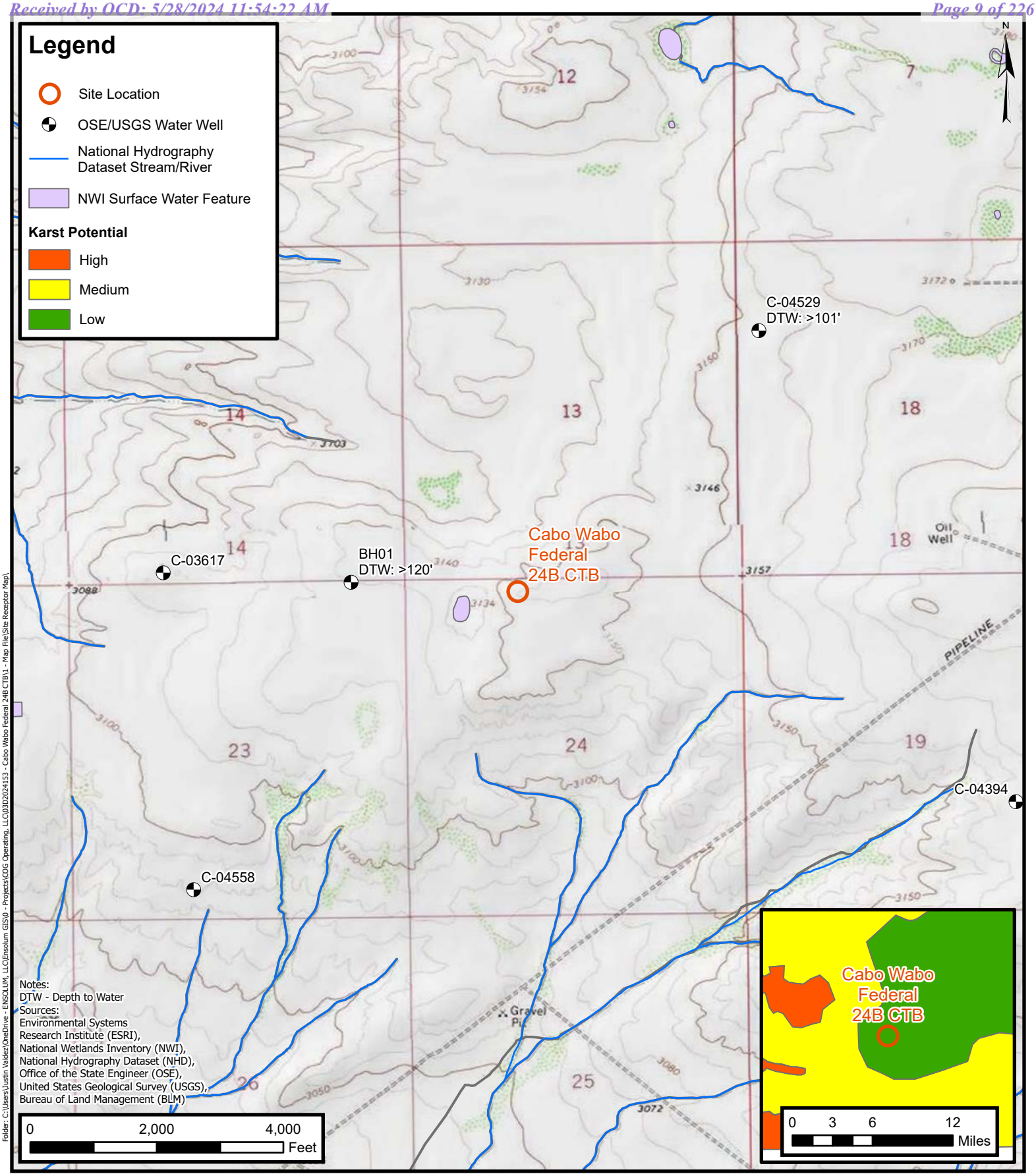
FIGURES



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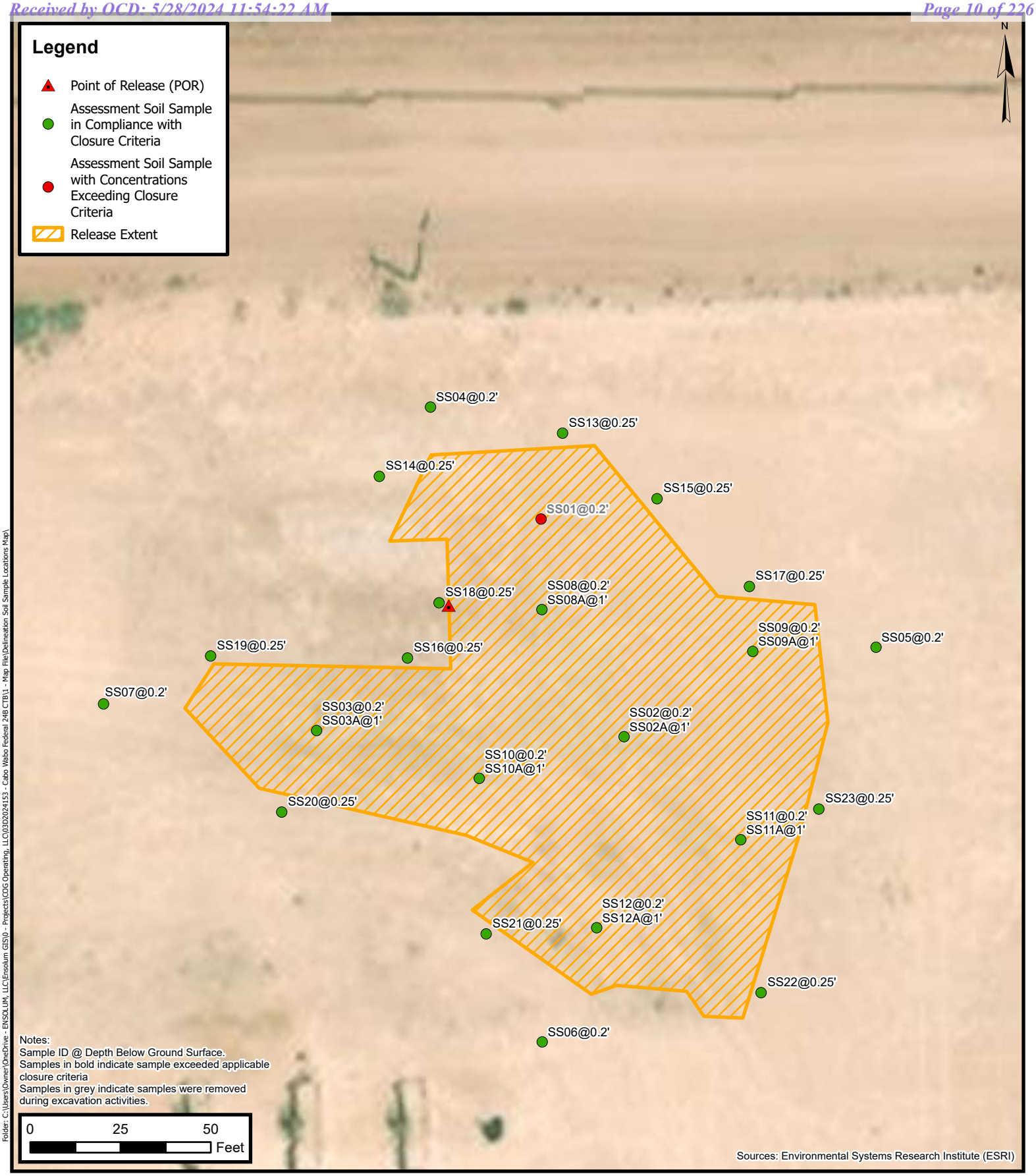
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Cabo Wabo Federal 24B CTB
Incident Number: NAPP2301933240
Unit C, Sec 24, T 25S, R 29E
Eddy County, New Mexico

FIGURE 1



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024153 - Cabo Wabo Federal 24B CTB\1 - Map File\Delineation Soil Sample Locations Map\

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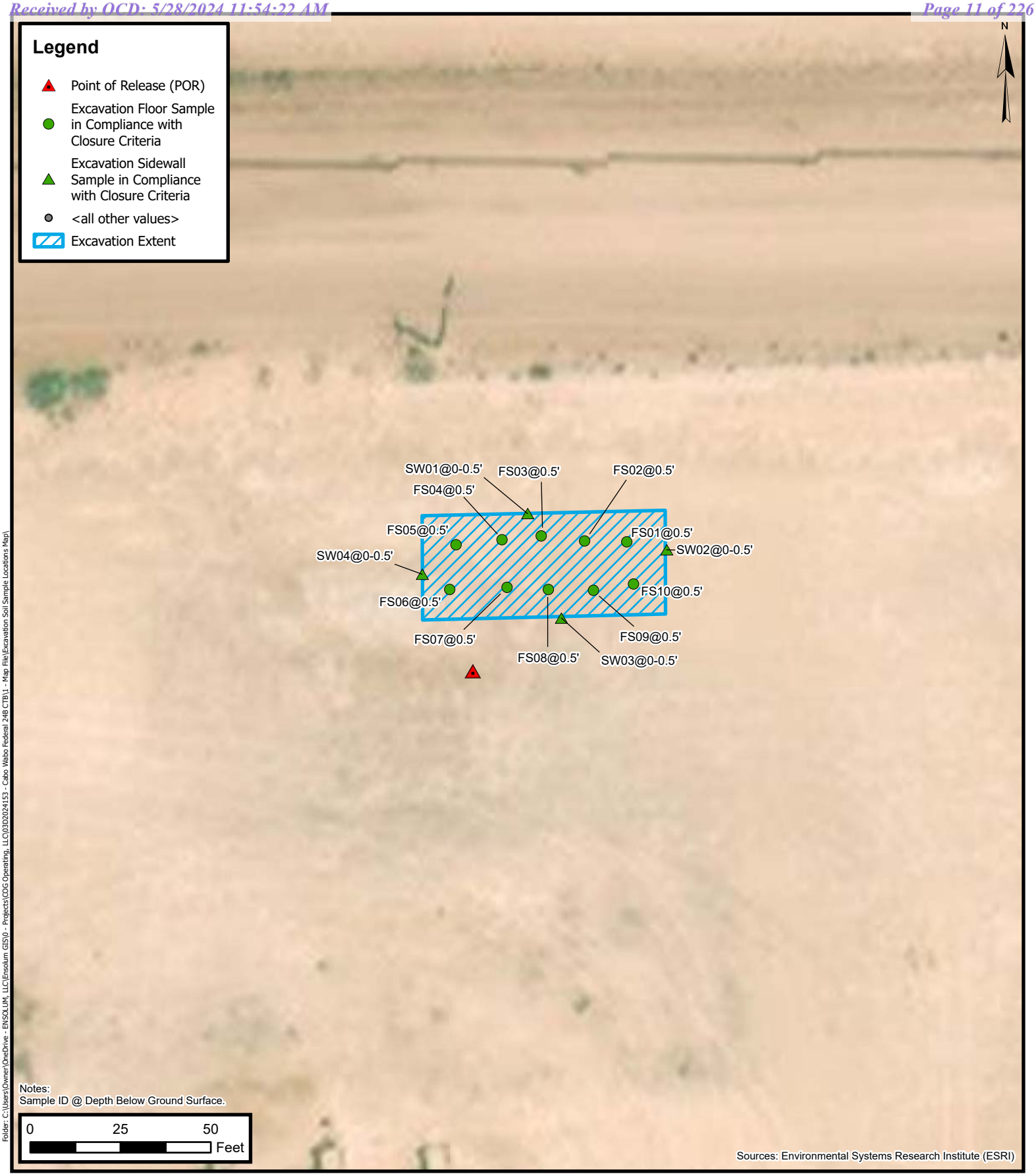
Environmental, Engineering and Hydrogeologic Consultants

Assessment Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal 24B CTB
Incident Number: NAPP2301933240
Unit C, Sec 24, T 25S, R 29E
Eddy County, New Mexico

FIGURE 2



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03D2024153 - Cabo Wabo Federal 24B CTB\1 - Map File\Excavation Soil Sample Locations Map\

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Excavation Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal 24B CTB
Incident Number: NAPP2301933240
Unit C, Sec 24, T 25S, R 29E
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Cabo Wabo Federal 24 B CTB
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	02/16/2023	0.2	<0.00200	<0.00401	<50.0	3740	<50.0	3,740	**3,740**	7,030
SS02	02/16/2023	0.2	<0.00200	<0.00399	<49.9	487	<49.9	487	487	776
SS02A	05/15/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1050
SS03	02/16/2023	0.2	<0.00198	<0.00396	<49.9	78.3	<49.9	78.3	78.3	1,530
SS03A	05/15/2023	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	701
SS04	02/16/2023	0.2	<0.00199	<0.00398	<49.9	83.7	<49.9	83.7	83.7	395
SS05	02/16/2023	0.2	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	152
SS06	02/16/2023	0.2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	92.4
SS07	02/16/2023	0.2	<0.00199	<0.00398	<49.9	11.6	<49.9	11.6	11.6	303
SS08	05/15/2023	0.2	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	892
SS08A	05/15/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	420
SS09	05/15/2023	0.2	<0.00199	<0.00398	<50.0	78.3	<50.0	78.3	78.3	1,740
SS09A	05/15/2023	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	804
SS10	05/15/2023	0.2	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	635
SS10A	05/15/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	809
SS11	05/15/2023	0.2	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	1,400
SS11A	05/15/2023	1	<0.00199	<0.00398	<49.9	54.6	<49.9	54.6	54.6	246
SS12	05/15/2023	0.2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,260
SS12A	05/15/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	732

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Cabo Wabo Federal 24 B CTB
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
SS13	01/31/2024	0.25	<0.00200	<0.00399	<49.8	57.3	<49.8	57.3	57.3	371
SS14	01/31/2024	0.25	<0.00201	<0.00402	<49.6	77.8	<49.6	77.8	77.8	314
SS15	01/31/2024	0.25	<0.00200	<0.00402	<50.1	70.0	<50.1	70.0	70.0	389
SS16	01/31/2024	0.25	<0.00199	<0.00398	<50.2	90.7	<50.2	90.7	90.7	383
SS17	01/31/2024	0.25	<0.00199	<0.00398	<49.9	69.7	<49.9	69.7	69.7	349
SS18	01/31/2024	0.25	<0.00200	<0.00399	<50.0	81.3	<50.0	81.3	81.3	371
SS19	01/31/2024	0.25	<0.00201	<0.00402	<49.8	89.4	<49.8	89.4	89.4	371
SS20	01/31/2024	0.25	<0.00200	<0.00401	<50.1	92.6	<50.1	92.6	92.6	369
SS21	01/31/2024	0.25	<0.00199	<0.00398	<50.4	82.4	<50.4	82.4	82.4	300
SS22	01/31/2024	0.25	<0.00199	<0.00398	<50.2	95.6	<50.2	95.6	95.6	600
SS23	01/31/2024	0.25	<0.00200	<0.00399	<49.6	76.4	<49.6	76.4	76.4	547
Excavation Soil Samples										
FS01	05/15/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	3,090
FS02	05/15/2023	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	849
FS03	05/15/2023	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	654
FS04	05/15/2023	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	2,040
FS05	05/15/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,740
FS06	05/15/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	598
FS07	05/15/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	1,430
FS08	05/15/2023	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	627
FS09	05/15/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,620
FS10	05/15/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	287

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Cabo Wabo Federal 24 B CTB
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**
SW01	02/27/2024	0 - 0.5	<0.000388	<0.00102	28.0	10.5	20.9	59.4	59.4	166
SW02	02/27/2024	0 - 0.5	<0.000387	0.00129	25.8	57.8	<15.1	83.6	83.6	296
SW03	02/27/2024	0 - 0.5	<0.000386	<0.00101	45.2	35.3	<15.1	80.5	80.5	82.7
SW04	02/27/2024	0 - 0.5	<0.000381	<0.00100	37.0	30.6	<15.1	67.6	67.6	303

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

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APPENDIX A

Photographic Log

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Photographic Log
COG Operating, LLC
Cabo Wabo Federal 24 B CTB
Incident Number NAPP230193240

Photograph 1 Date: 1/5/2023
Description: Initial release
View: Northwest

Photograph 2 Date: 5/15/2023
Description: Release staining
View: South

Photograph 3 Date: 5/15/2023
Description: Completed excavation
View: South

Photograph 4 Date: 1/31/2024
Description: Additional sampling activities
View: North

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APPENDIX B

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
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JOB DESCRIPTION

CABO WABO FEDERAL 24B CTB
03D2024153

JOB NUMBER

890-6079-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

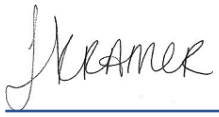
Eurofins Carlsbad

Job Notes

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

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

Authorization



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Authorized for release by
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Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Laboratory Job ID: 890-6079-1
SDG: 03D2024153

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
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 Job ID: 890-6079-1
Project: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1 Eurofins Carlsbad

Job Narrative
890-6079-1

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: SS 13 (890-6079-1), SS 14 (890-6079-2), SS 15 (890-6079-3), SS 16 (890-6079-4), SS 17 (890-6079-5), SS 18 (890-6079-6), SS 19 (890-6079-7), SS 20 (890-6079-8), SS 21 (890-6079-9), SS 22 (890-6079-10) and SS 23 (890-6079-11).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS 13 (890-6079-1), SS 15 (890-6079-3), SS 16 (890-6079-4), SS 18 (890-6079-6), SS 19 (890-6079-7), SS 20 (890-6079-8) and (890-6078-A-1-F). 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: (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 surrogate recovery for the blank associated with preparation batch 880-72343 and analytical batch 880-72615 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-6077-A-1-B) and (890-6077-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS 23 (890-6079-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-72343 and analytical batch 880-72615 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) 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 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-72343 and analytical batch 880-72615. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-72386 and analytical batch 880-72614 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS 13 (890-6079-1), SS 14 (890-6079-2), SS 17 (890-6079-5), SS 21 (890-6079-9) and SS 22 (890-6079-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

Client: Ensolum Job ID: 890-6079-1
Project: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1 (Continued) Eurofins Carlsbad

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.

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-72130 and analytical batch 880-72328 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.

Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 13

Date Collected: 01/31/24 09:00
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Lab Sample ID: 890-6079-1
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		02/11/24 13:26	02/12/24 15:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 15:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 15:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 15:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 15:21	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*178*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 15:21*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*02/11/24 13:26*	*02/12/24 15:21*	*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 15:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.3**		49.8		mg/Kg			02/09/24 00:53	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		02/05/24 13:54	02/09/24 00:53	1
Diesel Range Organics (Over C10-C28)	**57.3**		49.8		mg/Kg		02/05/24 13:54	02/09/24 00:53	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/05/24 13:54	02/09/24 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*51*	*S1-*	*70 - 130*	*02/05/24 13:54*	*02/09/24 00:53*	*1*
o-Terphenyl	*46*	*S1-*	*70 - 130*	*02/05/24 13:54*	*02/09/24 00:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**371**		4.95		mg/Kg			02/05/24 15:37	1

Client Sample ID: SS 14

Date Collected: 01/31/24 09:05
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Lab Sample ID: 890-6079-2
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		02/11/24 13:26	02/12/24 15:47	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 15:47	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 15:47	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 15:47	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 15:47	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*02/11/24 13:26*	*02/12/24 15:47*	*1*

Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 14

Date Collected: 01/31/24 09:05
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Lab Sample ID: 890-6079-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*02/11/24 13:26*	*02/12/24 15:47*	*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 15:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**77.8**		49.6	mg/Kg			02/09/24 01:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		02/05/24 13:54	02/09/24 01:15	1
Diesel Range Organics (Over C10-C28)	**77.8**		49.6	mg/Kg		02/05/24 13:54	02/09/24 01:15	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		02/05/24 13:54	02/09/24 01:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*67*	*S1-*	*70 - 130*	*02/05/24 13:54*	*02/09/24 01:15*	*1*
o-Terphenyl	*61*	*S1-*	*70 - 130*	*02/05/24 13:54*	*02/09/24 01:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**314**		4.97	mg/Kg			02/05/24 15:51	1

Client Sample ID: SS 15

Date Collected: 01/31/24 09:10
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Lab Sample ID: 890-6079-3

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		02/11/24 13:26	02/12/24 16:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:26	02/12/24 16:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:26	02/12/24 16:14	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/11/24 13:26	02/12/24 16:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:26	02/12/24 16:14	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/11/24 13:26	02/12/24 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 16:14*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*02/11/24 13:26*	*02/12/24 16:14*	*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 16:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**70.0**		50.1	mg/Kg			02/09/24 01:37	1

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Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 15

Lab Sample ID: 890-6079-3
Matrix: Solid
Date Collected: 01/31/24 09:10
Date Received: 01/31/24 11:49
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	<50.1	U	50.1		mg/Kg		02/05/24 13:54	02/09/24 01:37	1
Diesel Range Organics (Over C10-C28)	**70.0**		50.1		mg/Kg		02/05/24 13:54	02/09/24 01:37	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/05/24 13:54	02/09/24 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*02/05/24 13:54*	*02/09/24 01:37*	*1*
o-Terphenyl	*73*		*70 - 130*	*02/05/24 13:54*	*02/09/24 01:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**389**		5.04		mg/Kg			02/05/24 15:56	1

Client Sample ID: SS 16

Lab Sample ID: 890-6079-4
Matrix: Solid
Date Collected: 01/31/24 09:15
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 18:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 18:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 18:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 18:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 18:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 18:00*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/11/24 13:26*	*02/12/24 18:00*	*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			02/12/24 18:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**90.7**		50.2		mg/Kg			02/09/24 01:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		02/05/24 13:54	02/09/24 01:59	1
Diesel Range Organics (Over C10-C28)	**90.7**		50.2		mg/Kg		02/05/24 13:54	02/09/24 01:59	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		02/05/24 13:54	02/09/24 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*02/05/24 13:54*	*02/09/24 01:59*	*1*
o-Terphenyl	*88*		*70 - 130*	*02/05/24 13:54*	*02/09/24 01:59*	*1*

Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 16

Lab Sample ID: 890-6079-4
Matrix: Solid
Date Collected: 01/31/24 09:15
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	**383**		5.05		mg/Kg			02/05/24 16:01	1

Client Sample ID: SS 17

Lab Sample ID: 890-6079-5
Matrix: Solid
Date Collected: 01/31/24 09:20
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 18:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 18:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 18:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 18:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 18:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/11/24 13:26*	*02/12/24 18:27*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*02/11/24 13:26*	*02/12/24 18:27*	*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 18:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**69.7**		49.9		mg/Kg			02/09/24 02:21	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		02/05/24 13:54	02/09/24 02:21	1
Diesel Range Organics (Over C10-C28)	**69.7**		49.9		mg/Kg		02/05/24 13:54	02/09/24 02:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/05/24 13:54	02/09/24 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*02/05/24 13:54*	*02/09/24 02:21*	*1*
o-Terphenyl	*71*		*70 - 130*	*02/05/24 13:54*	*02/09/24 02:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**349**		4.98		mg/Kg			02/05/24 16:06	1

Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 18

Lab Sample ID: 890-6079-6
Matrix: Solid
Date Collected: 01/31/24 09:25
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 18:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 18:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 18:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 18:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 18:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 18:53*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*02/11/24 13:26*	*02/12/24 18:53*	*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 18:53	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**81.3**		50.0		mg/Kg			02/09/24 02:43	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		02/05/24 13:54	02/09/24 02:43	1
Diesel Range Organics (Over C10-C28)	**81.3**		50.0		mg/Kg		02/05/24 13:54	02/09/24 02:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/05/24 13:54	02/09/24 02:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*02/05/24 13:54*	*02/09/24 02:43*	*1*
o-Terphenyl	*92*		*70 - 130*	*02/05/24 13:54*	*02/09/24 02:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**371**		4.99		mg/Kg			02/05/24 16:11	1

Client Sample ID: SS 19

Lab Sample ID: 890-6079-7
Matrix: Solid
Date Collected: 01/31/24 09:30
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 19:19	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 19:19	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 19:19	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 19:19	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:26	02/12/24 19:19	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/24 13:26	02/12/24 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 19:19*	*1*

Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 19

Lab Sample ID: 890-6079-7
Matrix: Solid
Date Collected: 01/31/24 09:30
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*02/11/24 13:26*	*02/12/24 19:19*	*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 19:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**89.4**		49.8	mg/Kg			02/09/24 03:04	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		02/05/24 13:54	02/09/24 03:04	1
Diesel Range Organics (Over C10-C28)	**89.4**		49.8	mg/Kg		02/05/24 13:54	02/09/24 03:04	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		02/05/24 13:54	02/09/24 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*02/05/24 13:54*	*02/09/24 03:04*	*1*
o-Terphenyl	*85*		*70 - 130*	*02/05/24 13:54*	*02/09/24 03:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**371**		5.01	mg/Kg			02/05/24 16:16	1

Client Sample ID: SS 20

Lab Sample ID: 890-6079-8
Matrix: Solid
Date Collected: 01/31/24 09:35
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 19:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:26	02/12/24 19:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:26	02/12/24 19:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/11/24 13:26	02/12/24 19:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:26	02/12/24 19:47	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/11/24 13:26	02/12/24 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*02/11/24 13:26*	*02/12/24 19:47*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*02/11/24 13:26*	*02/12/24 19:47*	*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 19:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**92.6**		50.1	mg/Kg			02/09/24 03:26	1

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Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 20

Lab Sample ID: 890-6079-8
Matrix: Solid
Date Collected: 01/31/24 09:35
Date Received: 01/31/24 11:49
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	<50.1	U	50.1		mg/Kg		02/05/24 13:54	02/09/24 03:26	1
Diesel Range Organics (Over C10-C28)	**92.6**		50.1		mg/Kg		02/05/24 13:54	02/09/24 03:26	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/05/24 13:54	02/09/24 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*02/05/24 13:54*	*02/09/24 03:26*	*1*
o-Terphenyl	*92*		*70 - 130*	*02/05/24 13:54*	*02/09/24 03:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**369**		5.03		mg/Kg			02/05/24 16:21	1

Client Sample ID: SS 21

Lab Sample ID: 890-6079-9
Matrix: Solid
Date Collected: 01/31/24 09:40
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 20:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 20:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 20:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 20:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 20:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*02/11/24 13:26*	*02/12/24 20:14*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*02/11/24 13:26*	*02/12/24 20:14*	*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			02/12/24 20:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**82.4**		50.4		mg/Kg			02/09/24 03:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		02/05/24 13:54	02/09/24 03:48	1
Diesel Range Organics (Over C10-C28)	**82.4**		50.4		mg/Kg		02/05/24 13:54	02/09/24 03:48	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/05/24 13:54	02/09/24 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*69*	*S1-*	*70 - 130*	*02/05/24 13:54*	*02/09/24 03:48*	*1*
o-Terphenyl	*71*		*70 - 130*	*02/05/24 13:54*	*02/09/24 03:48*	*1*

Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 21

Lab Sample ID: 890-6079-9
Matrix: Solid
Date Collected: 01/31/24 09:40
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	**300**	**F1**	24.9		mg/Kg			02/05/24 12:54	5

Client Sample ID: SS 22

Lab Sample ID: 890-6079-10
Matrix: Solid
Date Collected: 01/31/24 09:45
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	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 20:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 20:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 20:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 20:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:26	02/12/24 20:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:26	02/12/24 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/11/24 13:26*	*02/12/24 20:41*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*02/11/24 13:26*	*02/12/24 20:41*	*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 20:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**95.6**		50.2		mg/Kg			02/09/24 04:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		02/05/24 13:54	02/09/24 04:10	1
Diesel Range Organics (Over C10-C28)	**95.6**		50.2		mg/Kg		02/05/24 13:54	02/09/24 04:10	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		02/05/24 13:54	02/09/24 04:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*02/05/24 13:54*	*02/09/24 04:10*	*1*
o-Terphenyl	*71*		*70 - 130*	*02/05/24 13:54*	*02/09/24 04:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**600**		24.9		mg/Kg			02/05/24 13:41	5

Client Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 23

Date Collected: 01/31/24 09:50
Date Received: 01/31/24 11:49
Sample Depth: 0.25'

Lab Sample ID: 890-6079-11

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		02/11/24 13:26	02/12/24 21:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 21:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 21:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 21:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:26	02/12/24 21:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/11/24 13:26	02/12/24 21:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*02/11/24 13:26*	*02/12/24 21:09*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/11/24 13:26*	*02/12/24 21:09*	*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 21:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**76.4**		49.6		mg/Kg			02/08/24 18:21	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	<49.6	U	49.6		mg/Kg		02/05/24 10:14	02/08/24 18:21	1
Diesel Range Organics (Over C10-C28)	**76.4**		49.6		mg/Kg		02/05/24 10:14	02/08/24 18:21	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		02/05/24 10:14	02/08/24 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*02/05/24 10:14*	*02/08/24 18:21*	*1*
o-Terphenyl	*110*		*70 - 130*	*02/05/24 10:14*	*02/08/24 18:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**547**		24.8		mg/Kg			02/05/24 13:48	5

Surrogate Summary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

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-A-1-D MS	Matrix Spike	107	79
890-6078-A-1-E MSD	Matrix Spike Duplicate	132 S1+	105
890-6079-1	SS 13	178 S1+	108
890-6079-2	SS 14	124	78
890-6079-3	SS 15	143 S1+	108
890-6079-4	SS 16	141 S1+	93
890-6079-5	SS 17	110	75
890-6079-6	SS 18	138 S1+	79
890-6079-7	SS 19	142 S1+	76
890-6079-8	SS 20	133 S1+	112
890-6079-9	SS 21	121	97
890-6079-10	SS 22	107	92
890-6079-11	SS 23	127	111
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	1CO1 (70-130)	OTPH1 (70-130)
890-6075-A-21-E MS	Matrix Spike	90	91
890-6075-A-21-F MSD	Matrix Spike Duplicate	98	98
890-6077-A-1-C MS	Matrix Spike	115	91
890-6077-A-1-D MSD	Matrix Spike Duplicate	146 S1+	122
890-6079-1	SS 13	51 S1-	46 S1-
890-6079-2	SS 14	67 S1-	61 S1-
890-6079-3	SS 15	74	73
890-6079-4	SS 16	89	88
890-6079-5	SS 17	68 S1-	71
890-6079-6	SS 18	89	92
890-6079-7	SS 19	80	85
890-6079-8	SS 20	87	92
890-6079-9	SS 21	69 S1-	71
890-6079-10	SS 22	68 S1-	71
890-6079-11	SS 23	131 S1+	110
LCS 880-72343/2-A	Lab Control Sample	97	95
LCS 880-72386/2-A	Lab Control Sample	100	103
LCSD 880-72343/3-A	Lab Control Sample Dup	96	95
LCSD 880-72386/3-A	Lab Control Sample Dup	95	98
MB 880-72343/1-A	Method Blank	161 S1+	141 S1+
MB 880-72386/1-A	Method Blank	140 S1+	159 S1+

Surrogate Legend

1CO = 1-Chlorooctane

Surrogate Summary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

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-A-1-D MS
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Matrix Spike
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 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

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

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

Client Sample ID: Matrix Spike
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-A-1-E MSD
Matrix: Solid
Analysis Batch: 72833

Client Sample ID: Matrix Spike Duplicate
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 880-72343/1-A
Matrix: Solid
Analysis Batch: 72615

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72343

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		02/05/24 10:14	02/08/24 07:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/05/24 10:14	02/08/24 07:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/05/24 10:14	02/08/24 07:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*161*	*S1+*	*70 - 130*	*02/05/24 10:14*	*02/08/24 07:47*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*02/05/24 10:14*	*02/08/24 07:47*	*1*

Lab Sample ID: LCS 880-72343/2-A
Matrix: Solid
Analysis Batch: 72615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72343

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	811.1		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)			1000	872.0		mg/Kg		87	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

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

Lab Sample ID: LCS 880-72343/2-A
Matrix: Solid
Analysis Batch: 72615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72343

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: LCSD 880-72343/3-A
Matrix: Solid
Analysis Batch: 72615

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72343

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	848.3		mg/Kg		85	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	876.8		mg/Kg		88	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-6077-A-1-C MS
Matrix: Solid
Analysis Batch: 72615

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72343

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 F1 F2	999	1190		mg/Kg		116	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	920.2		mg/Kg		90	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-6077-A-1-D MSD
Matrix: Solid
Analysis Batch: 72615

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72343

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 F1 F2	999	<50.0	U F1 F2	mg/Kg		0.9	70 - 130	186	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	<50.0	U F1 F2	mg/Kg		0.3	70 - 130	191	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	146	S1+	70 - 130
o-Terphenyl	122		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

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

Lab Sample ID: MB 880-72386/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72614 — **Prep Batch: 72386**

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		02/05/24 13:54	02/08/24 19:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/05/24 13:54	02/08/24 19:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/05/24 13:54	02/08/24 19:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*02/05/24 13:54*	*02/08/24 19:04*	*1*
o-Terphenyl	*159*	*S1+*	*70 - 130*	*02/05/24 13:54*	*02/08/24 19:04*	*1*

Lab Sample ID: LCS 880-72386/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72614 — **Prep Batch: 72386**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1041		mg/Kg		104	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	903.4		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: LCSD 880-72386/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72614 — **Prep Batch: 72386**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	912.7		mg/Kg		91	70 - 130	13	20
Diesel Range Organics (Over C10-C28)			1000	866.9		mg/Kg		87	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: 890-6075-A-21-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72614 — **Prep Batch: 72386**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	1089		mg/Kg		103	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	744.3		mg/Kg		71	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

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

Lab Sample ID: 890-6075-A-21-E MS
Matrix: Solid
Analysis Batch: 72614

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72386

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-6075-A-21-F MSD
Matrix: Solid
Analysis Batch: 72614

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72386

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	1193		mg/Kg		113	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	792.5		mg/Kg		76	70 - 130	6	20

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

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-A-6-B MS
Matrix: Solid
Analysis Batch: 72321

Client Sample ID: Matrix Spike
Prep Type: Soluble

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

QC Sample Results

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-6078-A-6-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72321

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

Lab Sample ID: MB 880-72130/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72328

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/05/24 12:34	1

Lab Sample ID: LCS 880-72130/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72328

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	245.4		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-72130/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72328

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	243.4		mg/Kg		97	90 - 110	1	20

Lab Sample ID: 890-6079-9 MS — **Client Sample ID: SS 21**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	300	F1	1240	1733	F1	mg/Kg		115	90 - 110		

Lab Sample ID: 890-6079-9 MSD — **Client Sample ID: SS 21**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72328

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	300	F1	1240	1722	F1	mg/Kg		114	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

GC VOA

Prep Batch: 72819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Total/NA	Solid	5035	
890-6079-2	SS 14	Total/NA	Solid	5035	
890-6079-3	SS 15	Total/NA	Solid	5035	
890-6079-4	SS 16	Total/NA	Solid	5035	
890-6079-5	SS 17	Total/NA	Solid	5035	
890-6079-6	SS 18	Total/NA	Solid	5035	
890-6079-7	SS 19	Total/NA	Solid	5035	
890-6079-8	SS 20	Total/NA	Solid	5035	
890-6079-9	SS 21	Total/NA	Solid	5035	
890-6079-10	SS 22	Total/NA	Solid	5035	
890-6079-11	SS 23	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-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-6078-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 72833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Total/NA	Solid	8021B	72819
890-6079-2	SS 14	Total/NA	Solid	8021B	72819
890-6079-3	SS 15	Total/NA	Solid	8021B	72819
890-6079-4	SS 16	Total/NA	Solid	8021B	72819
890-6079-5	SS 17	Total/NA	Solid	8021B	72819
890-6079-6	SS 18	Total/NA	Solid	8021B	72819
890-6079-7	SS 19	Total/NA	Solid	8021B	72819
890-6079-8	SS 20	Total/NA	Solid	8021B	72819
890-6079-9	SS 21	Total/NA	Solid	8021B	72819
890-6079-10	SS 22	Total/NA	Solid	8021B	72819
890-6079-11	SS 23	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-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	72819
890-6078-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72819

Analysis Batch: 73048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Total/NA	Solid	Total BTEX	
890-6079-2	SS 14	Total/NA	Solid	Total BTEX	
890-6079-3	SS 15	Total/NA	Solid	Total BTEX	
890-6079-4	SS 16	Total/NA	Solid	Total BTEX	
890-6079-5	SS 17	Total/NA	Solid	Total BTEX	
890-6079-6	SS 18	Total/NA	Solid	Total BTEX	
890-6079-7	SS 19	Total/NA	Solid	Total BTEX	
890-6079-8	SS 20	Total/NA	Solid	Total BTEX	
890-6079-9	SS 21	Total/NA	Solid	Total BTEX	
890-6079-10	SS 22	Total/NA	Solid	Total BTEX	
890-6079-11	SS 23	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

GC Semi VOA

Prep Batch: 72343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-11	SS 23	Total/NA	Solid	8015NM Prep	
MB 880-72343/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-72343/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-72343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6077-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6077-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 72386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Total/NA	Solid	8015NM Prep	
890-6079-2	SS 14	Total/NA	Solid	8015NM Prep	
890-6079-3	SS 15	Total/NA	Solid	8015NM Prep	
890-6079-4	SS 16	Total/NA	Solid	8015NM Prep	
890-6079-5	SS 17	Total/NA	Solid	8015NM Prep	
890-6079-6	SS 18	Total/NA	Solid	8015NM Prep	
890-6079-7	SS 19	Total/NA	Solid	8015NM Prep	
890-6079-8	SS 20	Total/NA	Solid	8015NM Prep	
890-6079-9	SS 21	Total/NA	Solid	8015NM Prep	
890-6079-10	SS 22	Total/NA	Solid	8015NM Prep	
MB 880-72386/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-72386/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-72386/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6075-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6075-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 72614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Total/NA	Solid	8015B NM	72386
890-6079-2	SS 14	Total/NA	Solid	8015B NM	72386
890-6079-3	SS 15	Total/NA	Solid	8015B NM	72386
890-6079-4	SS 16	Total/NA	Solid	8015B NM	72386
890-6079-5	SS 17	Total/NA	Solid	8015B NM	72386
890-6079-6	SS 18	Total/NA	Solid	8015B NM	72386
890-6079-7	SS 19	Total/NA	Solid	8015B NM	72386
890-6079-8	SS 20	Total/NA	Solid	8015B NM	72386
890-6079-9	SS 21	Total/NA	Solid	8015B NM	72386
890-6079-10	SS 22	Total/NA	Solid	8015B NM	72386
MB 880-72386/1-A	Method Blank	Total/NA	Solid	8015B NM	72386
LCS 880-72386/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	72386
LCSD 880-72386/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	72386
890-6075-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	72386
890-6075-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	72386

Analysis Batch: 72615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-11	SS 23	Total/NA	Solid	8015B NM	72343
MB 880-72343/1-A	Method Blank	Total/NA	Solid	8015B NM	72343
LCS 880-72343/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	72343
LCSD 880-72343/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	72343
890-6077-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	72343
890-6077-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	72343

QC Association Summary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

GC Semi VOA

Analysis Batch: 72769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Total/NA	Solid	8015 NM	
890-6079-2	SS 14	Total/NA	Solid	8015 NM	
890-6079-3	SS 15	Total/NA	Solid	8015 NM	
890-6079-4	SS 16	Total/NA	Solid	8015 NM	
890-6079-5	SS 17	Total/NA	Solid	8015 NM	
890-6079-6	SS 18	Total/NA	Solid	8015 NM	
890-6079-7	SS 19	Total/NA	Solid	8015 NM	
890-6079-8	SS 20	Total/NA	Solid	8015 NM	
890-6079-9	SS 21	Total/NA	Solid	8015 NM	
890-6079-10	SS 22	Total/NA	Solid	8015 NM	
890-6079-11	SS 23	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 72129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Soluble	Solid	DI Leach	
890-6079-2	SS 14	Soluble	Solid	DI Leach	
890-6079-3	SS 15	Soluble	Solid	DI Leach	
890-6079-4	SS 16	Soluble	Solid	DI Leach	
890-6079-5	SS 17	Soluble	Solid	DI Leach	
890-6079-6	SS 18	Soluble	Solid	DI Leach	
890-6079-7	SS 19	Soluble	Solid	DI Leach	
890-6079-8	SS 20	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-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6078-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 72130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-9	SS 21	Soluble	Solid	DI Leach	
890-6079-10	SS 22	Soluble	Solid	DI Leach	
890-6079-11	SS 23	Soluble	Solid	DI Leach	
MB 880-72130/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72130/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72130/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6079-9 MS	SS 21	Soluble	Solid	DI Leach	
890-6079-9 MSD	SS 21	Soluble	Solid	DI Leach	

Analysis Batch: 72321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-1	SS 13	Soluble	Solid	300.0	72129
890-6079-2	SS 14	Soluble	Solid	300.0	72129
890-6079-3	SS 15	Soluble	Solid	300.0	72129
890-6079-4	SS 16	Soluble	Solid	300.0	72129
890-6079-5	SS 17	Soluble	Solid	300.0	72129
890-6079-6	SS 18	Soluble	Solid	300.0	72129
890-6079-7	SS 19	Soluble	Solid	300.0	72129
890-6079-8	SS 20	Soluble	Solid	300.0	72129

QC Association Summary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

HPLC/IC (Continued)

Analysis Batch: 72321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	72129
890-6078-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	72129

Analysis Batch: 72328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6079-9	SS 21	Soluble	Solid	300.0	72130
890-6079-10	SS 22	Soluble	Solid	300.0	72130
890-6079-11	SS 23	Soluble	Solid	300.0	72130
MB 880-72130/1-A	Method Blank	Soluble	Solid	300.0	72130
LCS 880-72130/2-A	Lab Control Sample	Soluble	Solid	300.0	72130
LCSD 880-72130/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72130
890-6079-9 MS	SS 21	Soluble	Solid	300.0	72130
890-6079-9 MSD	SS 21	Soluble	Solid	300.0	72130

Lab Chronicle

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 13

Date Collected: 01/31/24 09:00
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-1
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			5.01 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 15:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 00:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 00:53	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:37	CH	EET MID

Client Sample ID: SS 14

Date Collected: 01/31/24 09:05
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-2
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			4.97 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 15:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 15:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 01:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 01:15	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:51	CH	EET MID

Client Sample ID: SS 15

Date Collected: 01/31/24 09:10
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72819	02/11/24 13:26	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72833	02/12/24 16:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 01:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 01:37	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 15:56	CH	EET MID

Client Sample ID: SS 16

Date Collected: 01/31/24 09:15
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-4
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			5.02 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 18:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 18:00	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 16

Date Collected: 01/31/24 09:15
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-4
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			72769	02/09/24 01:59	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 01:59	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 16:01	CH	EET MID

Client Sample ID: SS 17

Date Collected: 01/31/24 09:20
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-5
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			5.03 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 18:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 18:27	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 02:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 02:21	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 16:06	CH	EET MID

Client Sample ID: SS 18

Date Collected: 01/31/24 09:25
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-6
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			5.01 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 18:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 18:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 02:43	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 02:43	SM	EET MID
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 16:11	CH	EET MID

Client Sample ID: SS 19

Date Collected: 01/31/24 09:30
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-7
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			4.97 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 19:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 19:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 03:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 03:04	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 19

Date Collected: 01/31/24 09:30
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	72129	02/01/24 11:18	SMC	EET MID
Soluble	Analysis	300.0		1			72321	02/05/24 16:16	CH	EET MID

Client Sample ID: SS 20

Date Collected: 01/31/24 09:35
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-8

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			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 19:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 19:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 03:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 03:26	SM	EET MID
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 16:21	CH	EET MID

Client Sample ID: SS 21

Date Collected: 01/31/24 09:40
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-9

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			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 20:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 20:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 03:48	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 03:48	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	72130	02/01/24 11:22	SMC	EET MID
Soluble	Analysis	300.0		5			72328	02/05/24 12:54	CH	EET MID

Client Sample ID: SS 22

Date Collected: 01/31/24 09:45
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-10

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			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 20:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 20:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/09/24 04:10	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	72386	02/05/24 13:54	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72614	02/09/24 04:10	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	72130	02/01/24 11:22	SMC	EET MID
Soluble	Analysis	300.0		5			72328	02/05/24 13:41	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Client Sample ID: SS 23

Date Collected: 01/31/24 09:50
Date Received: 01/31/24 11:49

Lab Sample ID: 890-6079-11

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			5.01 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 21:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73048	02/12/24 21:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			72769	02/08/24 18:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	72343	02/05/24 10:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72615	02/08/24 18:21	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	72130	02/01/24 11:22	SMC	EET MID
Soluble	Analysis	300.0		5			72328	02/05/24 13:48	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 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: CABO WABO FEDERAL 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

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 24B CTB

Job ID: 890-6079-1
SDG: 03D2024153

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6079-1	SS 13	Solid	01/31/24 09:00	01/31/24 11:49	0.25'
890-6079-2	SS 14	Solid	01/31/24 09:05	01/31/24 11:49	0.25'
890-6079-3	SS 15	Solid	01/31/24 09:10	01/31/24 11:49	0.25'
890-6079-4	SS 16	Solid	01/31/24 09:15	01/31/24 11:49	0.25'
890-6079-5	SS 17	Solid	01/31/24 09:20	01/31/24 11:49	0.25'
890-6079-6	SS 18	Solid	01/31/24 09:25	01/31/24 11:49	0.25'
890-6079-7	SS 19	Solid	01/31/24 09:30	01/31/24 11:49	0.25'
890-6079-8	SS 20	Solid	01/31/24 09:35	01/31/24 11:49	0.25'
890-6079-9	SS 21	Solid	01/31/24 09:40	01/31/24 11:49	0.25'
890-6079-10	SS 22	Solid	01/31/24 09:45	01/31/24 11:49	0.25'
890-6079-11	SS 23	Solid	01/31/24 09:50	01/31/24 11:49	0.25'

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Chain of Custody

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

Work Order No: 6079

www.xenco.com Page 1 of 2

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 24B CTB	Turn Around	
Project Number:	03D2024153	☑ Routine ☐ Rush	
Project Location:	32.1222, -103.9408	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:	TPM467
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	TPH	BTEX	Chlorides
SS13	Soil	1.31.24	900	0.25'	Comp	1	X	X	X
SS14			905						
SS15			910						
SS16			915						
SS17			920						
SS18			925						
SS19			930						
SS20			935						
SS21			940						
SS22			945						

ANALYSIS REQUEST

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

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Chain of Custody

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

Work Order No:

www.xenco.com Page 2 of 2

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 24B CTB	Turn Around	
Project Number:	03D2024157	☑ Routine ☐ Rush	
Project Location:	32.1272, -103.9408	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	Parameters: TPH	BTEX	Chlorides
SS23	Soil	1-31-24	950	0.25'	Comp	1		X	X	X

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		11:50 1/31	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6079-1
SDG Number: 03D2024153

Login Number: 6079
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: 890-6079-1
SDG Number: 03D2024153

Login Number: 6079
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	

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/5/2024 12:44:49 PM

JOB DESCRIPTION

Cabo Wabo Federl 24B CTB
Eddy County

JOB NUMBER

880-40019-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

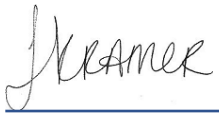
Eurofins Midland

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



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3/5/2024 12:44:49 PM

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

Client: Ensolum
Project/Site: Cabo Wabo Federl 24B CTB

Laboratory Job ID: 880-40019-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-40019-1
Project/Site: Cabo Wabo Federl 24B CTB SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
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.

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: 880-40019-1
Project: Cabo Wabo Federl 24B CTB

Job ID: 880-40019-1 Eurofins Midland

Job Narrative
880-40019-1

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 2/27/2024 4:47 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 0.5°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW01 (880-40019-1), SW02 (880-40019-2), SW03 (880-40019-3) and SW04 (880-40019-4).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-74384 and analytical batch 880-74314 was outside the upper control limits.

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 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 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

Client Sample ID: SW01

Date Collected: 02/27/24 11:05
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

Lab Sample ID: 880-40019-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	0.000388	mg/Kg		02/29/24 13:08	03/01/24 06:42	1
Toluene	<0.00202	U	0.00202	0.000460	mg/Kg		02/29/24 13:08	03/01/24 06:42	1
Ethylbenzene	<0.00202	U	0.00202	0.000570	mg/Kg		02/29/24 13:08	03/01/24 06:42	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	0.00102	mg/Kg		02/29/24 13:08	03/01/24 06:42	1
o-Xylene	<0.00202	U	0.00202	0.000347	mg/Kg		02/29/24 13:08	03/01/24 06:42	1
Xylenes, Total	<0.00403	U	0.00403	0.00102	mg/Kg		02/29/24 13:08	03/01/24 06:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*02/29/24 13:08*	*03/01/24 06:42*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*02/29/24 13:08*	*03/01/24 06:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	0.00102	mg/Kg			03/01/24 06:42	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	**28.0**	**J B**	49.6	14.9	mg/Kg		03/03/24 00:37	03/04/24 13:24	1
>C12-C28 Range Hydrocarbons	**10.5**		49.6	14.9	mg/Kg		03/03/24 00:37	03/04/24 13:24	1
>C28-C35 Range Hydrocarbons	**20.9**	**J**	49.6	14.9	mg/Kg		03/03/24 00:37	03/04/24 13:24	1
Total Petroleum Hydrocarbons (C6-C35)	**59.4**		49.6	14.9	mg/Kg			03/04/24 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*111*		*70 - 130*	*03/03/24 00:37*	*03/04/24 13:24*	*1*
o-Terphenyl (Surr)	*113*		*70 - 130*	*03/03/24 00:37*	*03/04/24 13:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**166**		5.03	0.397	mg/Kg			03/03/24 15:48	1

Client Sample ID: SW02

Date Collected: 02/27/24 11:07
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

Lab Sample ID: 880-40019-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		02/29/24 13:08	03/01/24 07:03	1
Toluene	**0.000607**	**J**	0.00201	0.000459	mg/Kg		02/29/24 13:08	03/01/24 07:03	1
Ethylbenzene	<0.00201	U	0.00201	0.000568	mg/Kg		02/29/24 13:08	03/01/24 07:03	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00102	mg/Kg		02/29/24 13:08	03/01/24 07:03	1
o-Xylene	**0.000680**	**J**	0.00201	0.000346	mg/Kg		02/29/24 13:08	03/01/24 07:03	1
Xylenes, Total	<0.00402	U	0.00402	0.00102	mg/Kg		02/29/24 13:08	03/01/24 07:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*02/29/24 13:08*	*03/01/24 07:03*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*02/29/24 13:08*	*03/01/24 07:03*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

Client Sample ID: SW02

Lab Sample ID: 880-40019-2
Matrix: Solid
Date Collected: 02/27/24 11:07
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00129**	**J**	0.00402	0.00102	mg/Kg			03/01/24 07:03	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	**25.8**	**J B**	50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 13:45	1
>C12-C28 Range Hydrocarbons	**57.8**		50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 13:45	1
>C28-C35 Range Hydrocarbons	<50.4	U	50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 13:45	1
Total Petroleum Hydrocarbons (C6-C35)	**83.6**		50.4	15.1	mg/Kg			03/04/24 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*112*		*70 - 130*	*03/03/24 00:37*	*03/04/24 13:45*	*1*
o-Terphenyl (Surr)	*119*		*70 - 130*	*03/03/24 00:37*	*03/04/24 13:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**296**		4.98	0.393	mg/Kg			03/03/24 16:18	1

Client Sample ID: SW03

Lab Sample ID: 880-40019-3
Matrix: Solid
Date Collected: 02/27/24 11:09
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000386	mg/Kg		02/29/24 13:08	03/01/24 07:23	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		02/29/24 13:08	03/01/24 07:23	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		02/29/24 13:08	03/01/24 07:23	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		02/29/24 13:08	03/01/24 07:23	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		02/29/24 13:08	03/01/24 07:23	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		02/29/24 13:08	03/01/24 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*02/29/24 13:08*	*03/01/24 07:23*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*02/29/24 13:08*	*03/01/24 07:23*	*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			03/01/24 07:23	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	**45.2**	**J B**	50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 14:07	1
>C12-C28 Range Hydrocarbons	**35.3**		50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 14:07	1
>C28-C35 Range Hydrocarbons	<50.4	U	50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 14:07	1
Total Petroleum Hydrocarbons (C6-C35)	**80.5**		50.4	15.1	mg/Kg			03/04/24 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*107*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:07*	*1*
o-Terphenyl (Surr)	*117*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:07*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

Client Sample ID: SW03

Date Collected: 02/27/24 11:09
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

Lab Sample ID: 880-40019-3

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**82.7**		4.96	0.392	mg/Kg			03/03/24 16:28	1

Client Sample ID: SW04

Date Collected: 02/27/24 11:11
Date Received: 02/27/24 16:47
Sample Depth: 0-0.5'

Lab Sample ID: 880-40019-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	0.000381	mg/Kg		02/29/24 13:08	03/01/24 07:44	1
Toluene	<0.00198	U	0.00198	0.000451	mg/Kg		02/29/24 13:08	03/01/24 07:44	1
Ethylbenzene	<0.00198	U	0.00198	0.000559	mg/Kg		02/29/24 13:08	03/01/24 07:44	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	0.00100	mg/Kg		02/29/24 13:08	03/01/24 07:44	1
o-Xylene	<0.00198	U	0.00198	0.000341	mg/Kg		02/29/24 13:08	03/01/24 07:44	1
Xylenes, Total	<0.00396	U	0.00396	0.00100	mg/Kg		02/29/24 13:08	03/01/24 07:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/29/24 13:08*	*03/01/24 07:44*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*02/29/24 13:08*	*03/01/24 07:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	0.00100	mg/Kg			03/01/24 07:44	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	**37.0**	**J B**	50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 14:28	1
>C12-C28 Range Hydrocarbons	**30.6**		50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 14:28	1
>C28-C35 Range Hydrocarbons	<50.4	U	50.4	15.1	mg/Kg		03/03/24 00:37	03/04/24 14:28	1
Total Petroleum Hydrocarbons (C6-C35)	**67.6**		50.4	15.1	mg/Kg			03/04/24 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*100*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:28*	*1*
o-Terphenyl (Surr)	*103*		*70 - 130*	*03/03/24 00:37*	*03/04/24 14:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**303**		4.97	0.393	mg/Kg			03/03/24 16:37	1

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl 24B CTB

Job ID: 880-40019-1
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)
880-40019-1	SW01	123	108
880-40019-2	SW02	123	104
880-40019-3	SW03	123	106
880-40019-4	SW04	113	109
LCS 880-74384/1-A	Lab Control Sample	100	101
LCSD 880-74384/2-A	Lab Control Sample Dup	103	98
MB 880-74189/5-A	Method Blank	114	125
MB 880-74384/5-A	Method Blank	133 S1+	137 S1+

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)
880-40019-1	SW01	111	113
880-40019-2	SW02	112	119
880-40019-3	SW03	107	117
880-40019-4	SW04	100	103
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 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-74189/5-A
Matrix: Solid
Analysis Batch: 74314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		02/27/24 14:20	02/29/24 12:19	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		02/27/24 14:20	02/29/24 12:19	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		02/27/24 14:20	02/29/24 12:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		02/27/24 14:20	02/29/24 12:19	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		02/27/24 14:20	02/29/24 12:19	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		02/27/24 14:20	02/29/24 12:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*02/27/24 14:20*	*02/29/24 12:19*	*1*
1,4-Difluorobenzene (Surr)	*125*		*70 - 130*	*02/27/24 14:20*	*02/29/24 12:19*	*1*

Lab Sample ID: MB 880-74384/5-A
Matrix: Solid
Analysis Batch: 74314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74384

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		02/29/24 13:08	02/29/24 23:56	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		02/29/24 13:08	02/29/24 23:56	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		02/29/24 13:08	02/29/24 23:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		02/29/24 13:08	02/29/24 23:56	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		02/29/24 13:08	02/29/24 23:56	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		02/29/24 13:08	02/29/24 23:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*02/29/24 13:08*	*02/29/24 23:56*	*1*
1,4-Difluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*02/29/24 13:08*	*02/29/24 23:56*	*1*

Lab Sample ID: LCS 880-74384/1-A
Matrix: Solid
Analysis Batch: 74314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09449		mg/Kg		94	70 - 130
Toluene	0.100	0.09116		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.08691		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	0.200	0.1846		mg/Kg		92	70 - 130
o-Xylene	0.100	0.09168		mg/Kg		92	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-74384/2-A
Matrix: Solid
Analysis Batch: 74314

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74384

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09672		mg/Kg		97	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federl 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

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

Lab Sample ID: LCSD 880-74384/2-A
Matrix: Solid
Analysis Batch: 74314

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74384

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08990		mg/Kg		90	70 - 130	1	35
Ethylbenzene			0.100	0.09149		mg/Kg		91	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1997		mg/Kg		100	70 - 130	8	35
o-Xylene			0.100	0.09856		mg/Kg		99	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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 24B CTB

Job ID: 880-40019-1
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 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

GC VOA

Prep Batch: 74189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-74189/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 74314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-1	SW01	Total/NA	Solid	8021B	74384
880-40019-2	SW02	Total/NA	Solid	8021B	74384
880-40019-3	SW03	Total/NA	Solid	8021B	74384
880-40019-4	SW04	Total/NA	Solid	8021B	74384
MB 880-74189/5-A	Method Blank	Total/NA	Solid	8021B	74189
MB 880-74384/5-A	Method Blank	Total/NA	Solid	8021B	74384
LCS 880-74384/1-A	Lab Control Sample	Total/NA	Solid	8021B	74384
LCSD 880-74384/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	74384

Prep Batch: 74384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-1	SW01	Total/NA	Solid	5035	
880-40019-2	SW02	Total/NA	Solid	5035	
880-40019-3	SW03	Total/NA	Solid	5035	
880-40019-4	SW04	Total/NA	Solid	5035	
MB 880-74384/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-74384/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-74384/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 74483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-1	SW01	Total/NA	Solid	Total BTEX	
880-40019-2	SW02	Total/NA	Solid	Total BTEX	
880-40019-3	SW03	Total/NA	Solid	Total BTEX	
880-40019-4	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 74530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-1	SW01	Total/NA	Solid	TX_1005_S_Prep	
880-40019-2	SW02	Total/NA	Solid	TX_1005_S_Prep	
880-40019-3	SW03	Total/NA	Solid	TX_1005_S_Prep	
880-40019-4	SW04	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
880-40019-1	SW01	Total/NA	Solid	TX 1005	74530
880-40019-2	SW02	Total/NA	Solid	TX 1005	74530

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federl 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

GC Semi VOA (Continued)

Analysis Batch: 74564 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-3	SW03	Total/NA	Solid	TX 1005	74530
880-40019-4	SW04	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: 74799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-1	SW01	Total/NA	Solid	TX 1005	
880-40019-2	SW02	Total/NA	Solid	TX 1005	
880-40019-3	SW03	Total/NA	Solid	TX 1005	
880-40019-4	SW04	Total/NA	Solid	TX 1005	

HPLC/IC

Leach Batch: 74240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-1	SW01	Soluble	Solid	DI Leach	
880-40019-2	SW02	Soluble	Solid	DI Leach	
880-40019-3	SW03	Soluble	Solid	DI Leach	
880-40019-4	SW04	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	

Analysis Batch: 74484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-40019-1	SW01	Soluble	Solid	300.0	74240
880-40019-2	SW02	Soluble	Solid	300.0	74240
880-40019-3	SW03	Soluble	Solid	300.0	74240
880-40019-4	SW04	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 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

Client Sample ID: SW01
Date Collected: 02/27/24 11:05
Date Received: 02/27/24 16:47

Lab Sample ID: 880-40019-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			74384	EL	EET MID	02/29/24 13:08
Total/NA	Analysis	8021B		1	74314	MNR	EET MID	03/01/24 06:42
Total/NA	Analysis	Total BTEX		1	74483	SM	EET MID	03/01/24 06:42
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 13:24
Total/NA	Analysis	TX 1005		1	74799	SM	EET MID	03/04/24 13:24
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 15:48

Client Sample ID: SW02
Date Collected: 02/27/24 11:07
Date Received: 02/27/24 16:47

Lab Sample ID: 880-40019-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			74384	EL	EET MID	02/29/24 13:08
Total/NA	Analysis	8021B		1	74314	MNR	EET MID	03/01/24 07:03
Total/NA	Analysis	Total BTEX		1	74483	SM	EET MID	03/01/24 07:03
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 13:45
Total/NA	Analysis	TX 1005		1	74799	SM	EET MID	03/04/24 13:45
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 16:18

Client Sample ID: SW03
Date Collected: 02/27/24 11:09
Date Received: 02/27/24 16:47

Lab Sample ID: 880-40019-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			74384	EL	EET MID	02/29/24 13:08
Total/NA	Analysis	8021B		1	74314	MNR	EET MID	03/01/24 07:23
Total/NA	Analysis	Total BTEX		1	74483	SM	EET MID	03/01/24 07:23
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 14:07
Total/NA	Analysis	TX 1005		1	74799	SM	EET MID	03/04/24 14:07
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 16:28

Client Sample ID: SW04
Date Collected: 02/27/24 11:11
Date Received: 02/27/24 16:47

Lab Sample ID: 880-40019-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			74384	EL	EET MID	02/29/24 13:08
Total/NA	Analysis	8021B		1	74314	MNR	EET MID	03/01/24 07:44
Total/NA	Analysis	Total BTEX		1	74483	SM	EET MID	03/01/24 07:44

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federl 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

Client Sample ID: SW04

Date Collected: 02/27/24 11:11
Date Received: 02/27/24 16:47

Lab Sample ID: 880-40019-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
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 14:28
Total/NA	Analysis	TX 1005		1	74799	SM	EET MID	03/04/24 14:28
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 16:37

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 24B CTB

Job ID: 880-40019-1
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 24B CTB

Job ID: 880-40019-1
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 24B CTB

Job ID: 880-40019-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-40019-1	SW01	Solid	02/27/24 11:05	02/27/24 16:47	0-0.5'
880-40019-2	SW02	Solid	02/27/24 11:07	02/27/24 16:47	0-0.5'
880-40019-3	SW03	Solid	02/27/24 11:09	02/27/24 16:47	0-0.5'
880-40019-4	SW04	Solid	02/27/24 11:11	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

V

880-40019 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 24B	CTB	Turn Around
Project Number:	03D2024153	☐ Routine	☐ Rush
Project Location:	Eddy County	Due Date:	
Sampler's Name:	Tabitha Griedian	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	03D2024153		

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:	-0.5
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	0.6
Total Containers:		Corrected Temperature:	0.5

ANALYSIS REQUEST

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	Parameters: BTEX 8021B	TPH 1005	Chlorides 300	Sample Comments
SW01	S	2/27/24	1105	0.05'	C	1	X	X	X	
SW02	S	2/27/24	1107	0.05'	C	1	X	X	X	
SW03	S	2/27/24	1107	0.05'	C	1	X	X	X	
SW04	S	2/27/24	1111	0.05'	C	1	X	X	X	

NTE 2/27/24 TNG

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: 880-40019-1
SDG Number: Eddy County

Login Number: 40019
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	

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APPENDIX C

Closure Request, dated June 29, 2023

ENSOLUM

June 29, 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 24 B CTB
Incident Number NAPP2301933240
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 24 B CTB (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from 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 NAPP2301933240.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit C, Section 24, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.1222°, -103.9408°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On January 5, 2023, corrosion on a flowback tank resulted in the release of approximately 7.816 barrels (bbls) of produced water onto the surrounding well pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 7 bbls of released produced water were recovered. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on January 19, 2023. The release was assigned Incident Number NAPP2301933240.

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. Depth to groundwater data, presented in the *Closure Request* for Incident Number nRM2034558291 and approved by NMOCD on July 30, 2021, is utilized to confirm depth to water greater than 100 bgs. A soil boring (BH01) was drilled during April 2021 via air rotary drilling rig to a depth of 105 feet bgs. The soil boring was located approximately 0.47 miles west

of the Site, the location of the soil boring is presented on Figure 1. No groundwater was encountered during drilling activities and the boring was properly abandoned. The associated well record is included in Appendix A.

The closest significant watercourse to the Site is an emergent wetland, located approximately 650 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, 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 February 16, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Eight assessment soil samples (SS01 through SS03 and SS08 through SS12) were collected within the release extent at a depth of approximately 0.2 feet bgs to assess for the presence or absence of impacted soil resulting from the release. Four assessment soil samples (SS04 through SS07) were collected outside the release extent in each cardinal direction at a depth of approximately 0.2 feet bgs to 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 sample SS01, collected at 0.2 feet bgs, indicated TPH and chloride concentrations exceeded the Site Closure Criteria. Laboratory analytical results for assessment samples SS02 through SS12, collected at 0.2 feet bgs, indicated all COC concentrations were compliant with the Site Closure Criteria. In addition, soil samples SS04 through SS07, collected around the release extent, were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release.

On May 15, 2023, Ensolum personnel returned to the Site to oversee additional delineation activities to further confirm the absence of impacted soil. Seven boreholes were advanced via hand-auger to a depth

of 1-foot bgs within the release extent at the location of assessment samples SS02, SS03, and SS08 through SS12. One soil sample was collected from each borehole at a depth of 1-foot bgs (SS02A, SS03A, and SS08A through SS12A). 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 indicated all COC concentrations were compliant with the Site Closure Criteria. Based on visible staining and laboratory analytical results for assessment sample SS01, excavation activities were warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 15, 2023, in coordination with delineation activities, Ensolum personnel were onsite to oversee excavation activities based on visible staining and laboratory analytical results for assessment sample SS01. 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 through FS10 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.

Laboratory analytical results for the excavation confirmation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation measured approximately 1,950 square feet in areal extent. A total of approximately 40 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 impacted soil resulting from the January 5, 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 delineated to the most stringent Table I Closure Criteria by assessment soil samples SS04 through SS07.

Initial response activities 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 NAPP2301933240. 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: Jacob Laird, COG Operating, LLC
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	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

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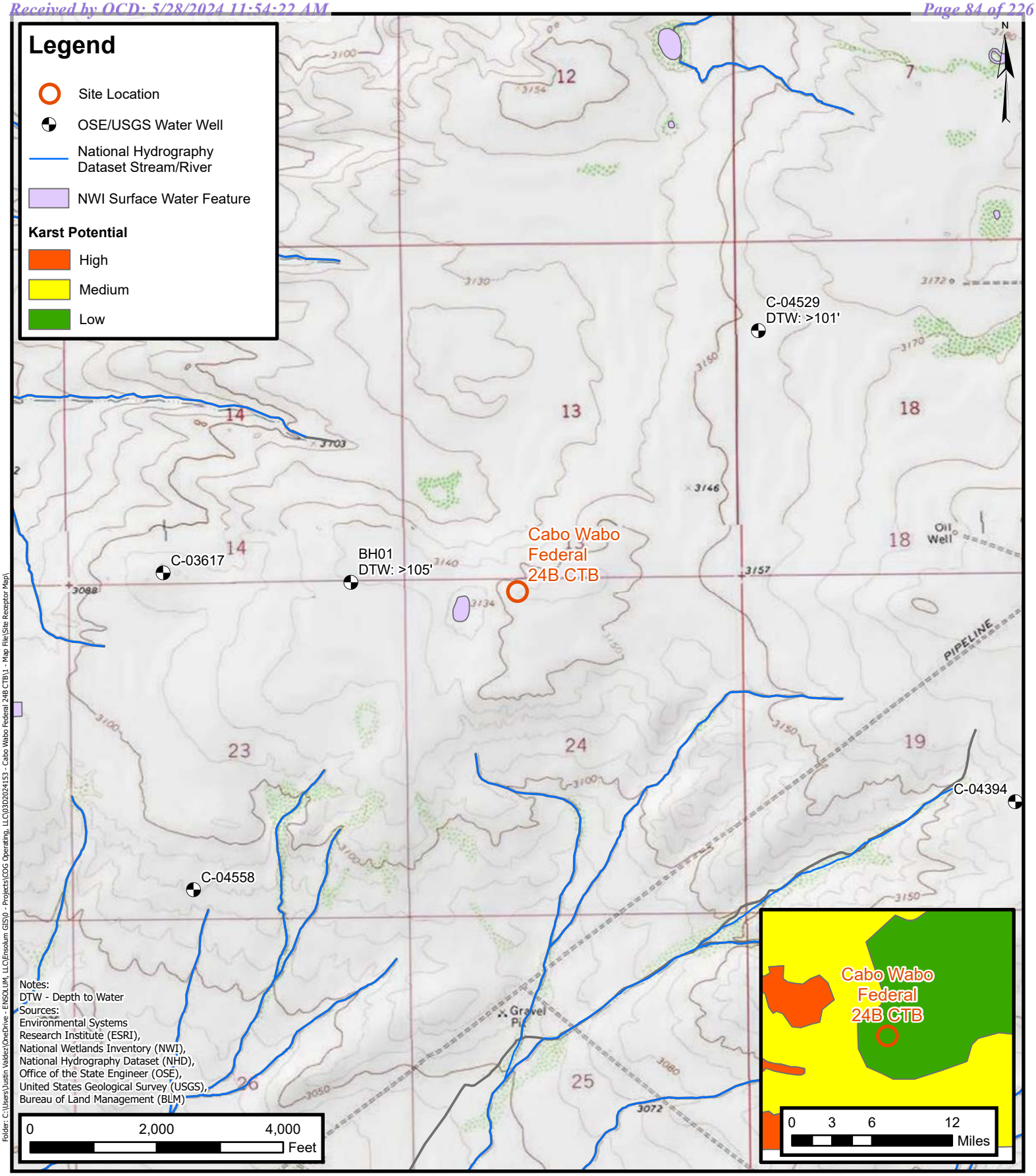
FIGURES



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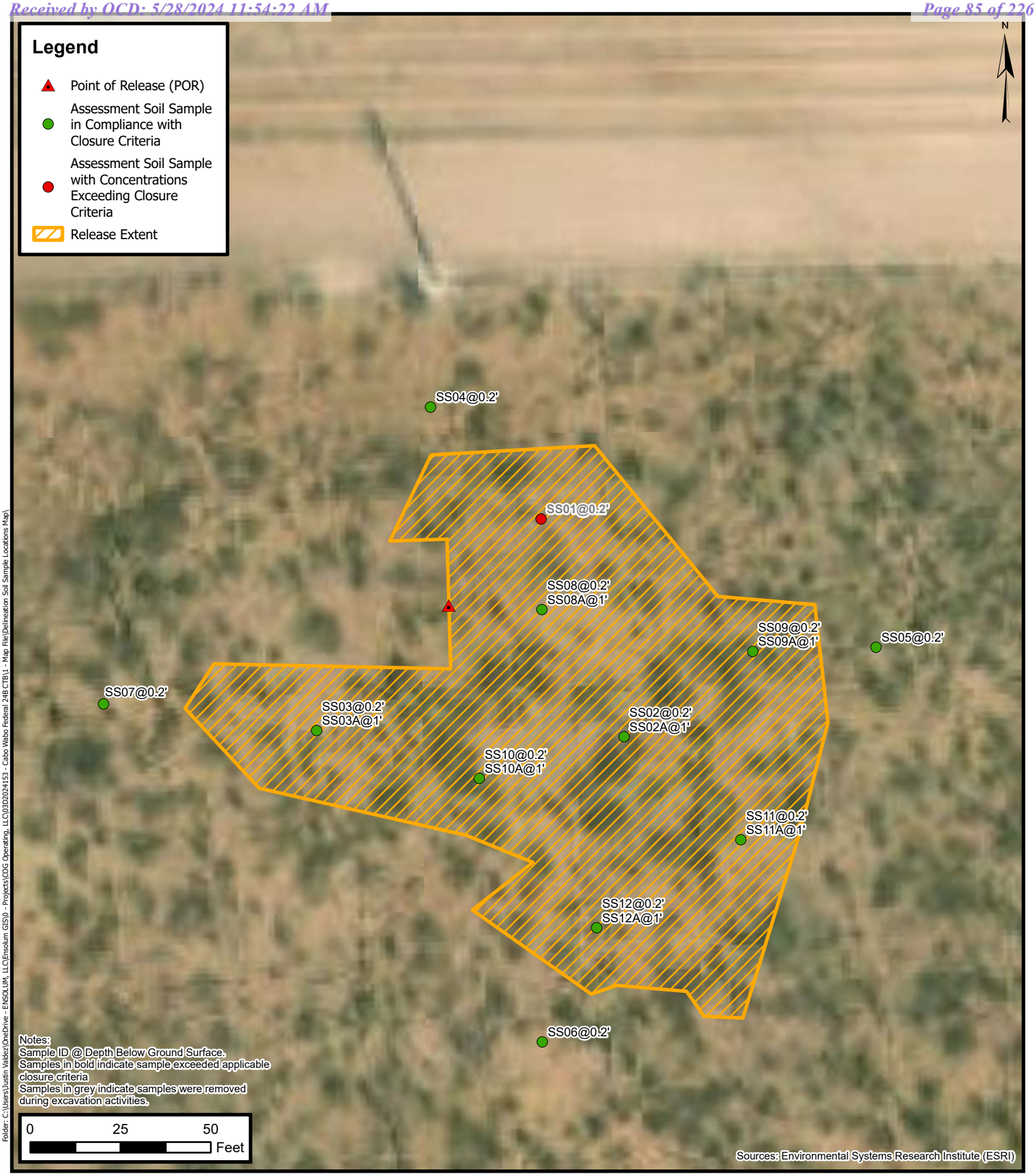
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Cabo Wabo Federal 24B CTB
Incident Number: NAPP2301933240
Unit C, Sec 24, T 25S, R 29E
Eddy County, New Mexico

FIGURE 1



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024153 - Cabo Wabo Federal 24B CTB\1 - Map File\Delineation Soil Sample Locations Map\

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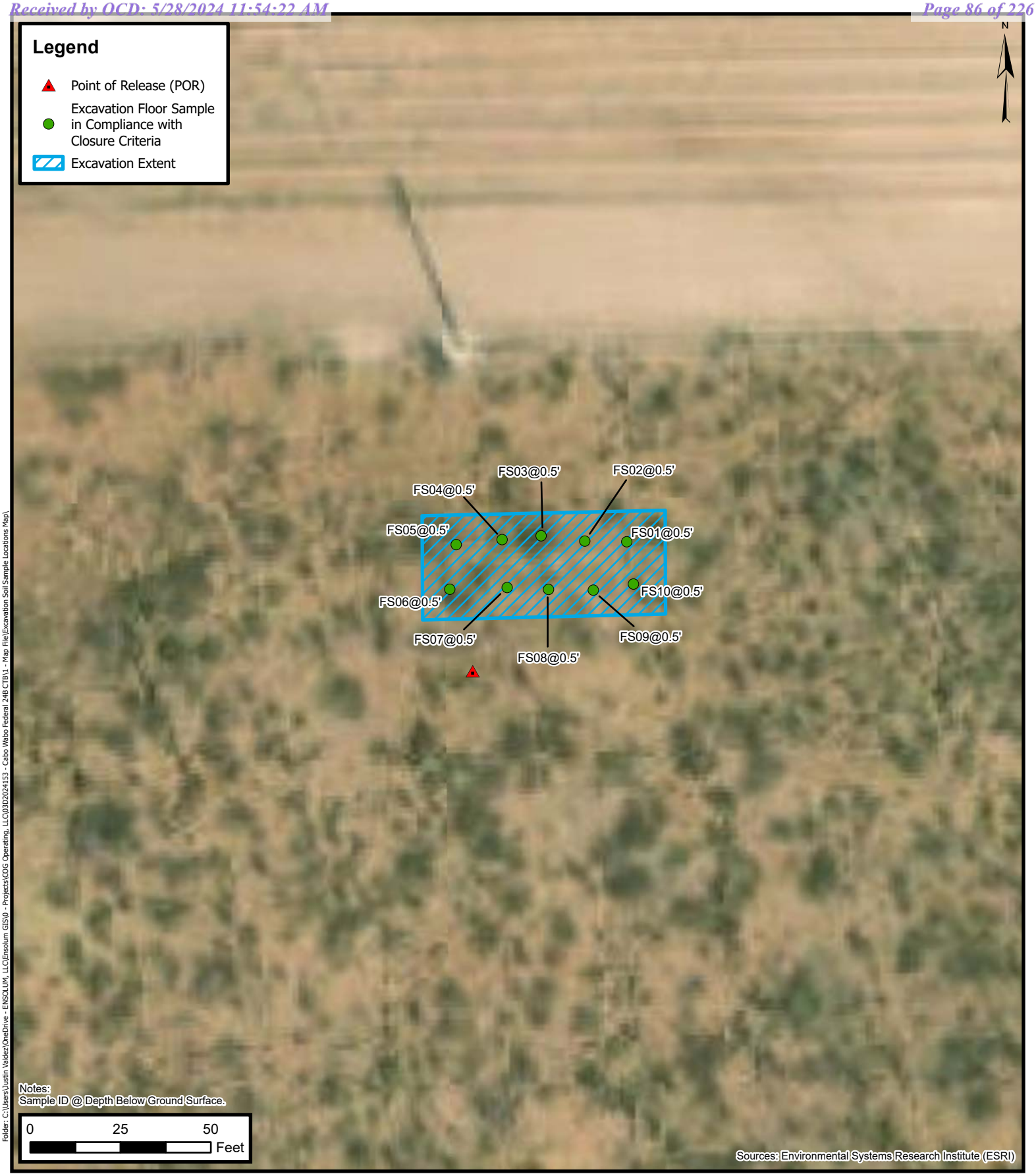
Assessment Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal 24B CTB
Incident Number: NAPP2301933240
Unit C, Sec 24, T 25S, R 29E
Eddy County, New Mexico

FIGURE 2



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024153 - Cabo Wabo Federal 24B CTB\1 - Map File\Excavation Soil Sample Locations Map\

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Excavation Soil Sample Locations

COG Operating, LLC
Cabo Wabo Federal 24B CTB
Incident Number: NAPP2301933240
Unit C, Sec 24, T 25S, R 29E
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Cabo Wabo Federal 24 B CTB
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	02/16/2023	0.2	<0.00200	<0.00401	<50.0	3740	<50.0	3,740	**3,740**	7,030
SS02	02/16/2023	0.2	<0.00200	<0.00399	<49.9	487	<49.9	487	487	776
SS02A	05/15/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1,050
SS03	02/16/2023	0.2	<0.00198	<0.00396	<49.9	78.3	<49.9	78.3	78.3	1,530
SS03A	05/15/2023	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	701
SS04	02/16/2023	0.2	<0.00199	<0.00398	<49.9	83.7	<49.9	83.7	83.7	395
SS05	02/16/2023	0.2	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	152
SS06	02/16/2023	0.2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	92.4
SS07	02/16/2023	0.2	<0.00199	<0.00398	<49.9	11.6	<49.9	11.6	11.6	303
SS08	05/15/2023	0.2	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	892
SS08A	05/15/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	420
SS09	05/15/2023	0.2	<0.00199	<0.00398	<50.0	78.3	<50.0	78.3	78.3	1,740
SS09A	05/15/2023	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	804
SS10	05/15/2023	0.2	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	635
SS10A	05/15/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	809
SS11	05/15/2023	0.2	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	1,400
SS11A	05/15/2023	1	<0.00199	<0.00398	<49.9	54.6	<49.9	54.6	54.6	246
SS12	05/15/2023	0.2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,260
SS12A	05/15/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	732
Excavation Soil Samples										
FS01	05/15/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	3,090
FS02	05/15/2023	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	849
FS03	05/15/2023	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	654
FS04	05/15/2023	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	2,040
FS05	05/15/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1740
FS06	05/15/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	598
FS07	05/15/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	1,430
FS08	05/15/2023	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	627
FS09	05/15/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	2,620
FS10	05/15/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	287

Notes:

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

ENSOLUM

APPENDIX A

Referenced Well Records

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	-	-	-	
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							

Open Hole, No Casing

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	
F6 B@1'	none	728	
F7 B@1'	none	928	
F8 B@1'	none	568	
F9 B@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	–	2088	
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

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04529 POD1	1	3	1	18	25S	30E	601077	3555733

Driller License: 1249 **Driller Company:** ATKINS ENGINEERING ASSOC. INC.

Driller Name: ATKINS, JACKIE D.UELENER

Drill Start Date:	05/14/2021	**Drill Finish Date:**	05/14/2021	**Plug Date:**	06/08/2021
Log File Date:	06/10/2021	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**		**Depth Water:**	

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 DIT JUN 10 2021 PM2:45

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 DII JUN 10 2021 PM2:45

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

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name: PLU 423	**RP Number:** 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 grained, 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			6' SAND, dry, poorly graded, light brwn-brwn, fine-very fine
					7		SP	
D			N		8			
					9			7.5' some mod consol ss light brwn-brwn, sub rounded
D			N		10		SW-S	
					11			10' abundant ss
					12			12' ss gravel absent
					13		SP	16' abundant ss gravel (mod consol)
					14			19' abundant - some
D			N		15			21.5' sandstone, light brwn-tan, dry, mod well consolidated, abundant
					16			
D			N		17		SW-S	
D			N		18			23' sandstone chunks absent
					19			
					20			
					21			
D			N		22			
					23			
					24			
D			N		25			

10-11' color change tan-off white

13' back to light brwn-brwn

2.5-4
9-12

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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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
D			N		27			
					28		SP	30' trace light ~~brwn - tan~~ grey - grey caliche pebbles (gravel), rounded
D			N		29			
					30			
					31			31' caliche pebbles absent
D			N		32			
					33			31.5' color change light brwn - reddish brwn
M			N		34			
					35			33-34' abundant ss chunks, mod consol
					36			35' ss chunks absent
M			N		37		SW-SM	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
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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
D			N		52			
M			N		53			53-54' some silty ss, poorly consolidated
M			N		54			
M			N		55			55.5' color change tan-grey band (30mm)
M			N		56			
D			N		57	X		59.5' SILTY sand, light brwn-brwn, moist, no plas, non cohesive, no stain
M			N		58			
M			N		59			
M			N		60		SM	62' more consolidated
D			N		61			64' dark brwn color change, silty clay nodules
M			N		62		SM-S	
M			N		63			66' pockets of silty clay brwn-green
M			N		64			
M			N		65			68' low plas clay pockets some, few low plas clay laminations
M			N		66			
M			N		67			
M			N		68			71' SILTY sand, dry, no plas, non cohesive, light brwn-tan
M			N		69			
M			N		70			74' trace caliche pebbles, light grey-grey
D			N		71		SM	
D			N		72			
D			N		73			
D			N		74			
D			N		75			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	2RP-3790
Logged By: FS, BB	**Method:** sonic
Lat/Long:	**Field Screening:** ~~CHLORIDES, PID~~
Hole Diameter: 6"/4"	**Total Depth:** 110'

LITHOLOGIC / SOIL SAMPLING LOG

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		
						85	SM	87' color change tan-off white
D			N			86		88' light brwn-brwn
						87	SM-S	
D			N			88		87' SILTSTONE, dry, w/ clay pockets, low plas
						89		
D			N			90		
						91		91' abundant clay pockets
						92		94.5' band yellow low plas clay
D			N			93		
						94	SM	
D			N			95	CH	end@95' 2/4/2020
								2/5/20
M			N			96		95'-101 CLAY, moist, brown-dark brown, high plasticity, cohesive, some tan clay laminations, no stain, no odor.
						97		
M			N			98		98'-99' tan fine grain sandstone stringer.
D			N			99		
M			N			100		

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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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			107'- 109' tan - light brown well consolidated fine grain sandstone stringer.
M			N		108			
					109			
					110		TD @ 110'	TD @ 110'
					111			
					112			
					113			
					114			
					115			
					116			
					117			
					118			
					119			
					120			
					121			
					122			
					123			
					124			
					125			

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
Cog Operating, LLC
Cabo Wabo Federal 24 B CTB
NAPP230193240

Photograph 1 Date: 1/5/2023
Description: Initial Release
View: Northwest

Photograph 2 Date: 5/15/2023
Description: Release Staining
View: South

Photograph 3 Date: 5/15/2023
Description: Excavation Activities
View: West

Photograph 4 Date: 5/15/2023
Description: Completed Excavation
View: South

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: SS02	Date: 5/15/2023
	Site Name: Cabo Wabo Federal Com 24 B CTB	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024153	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.12247,-103.94077	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	1181	3.9	N	SS02	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	918	0.2	N	SS02A	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: SS03	Date: 5/15/2023
	Site Name: Cabo Wabo Federal Com 24 B CTB	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024153	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.12248,-103.94105	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	1960	4.5	N	SS03	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	918	0.1	N	SS03A	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: 5/15/2023
	Site Name: Cabo Wabo Federal Com 24 B CTB	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024153	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122574,-103.940856	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	840	0.1	N	SS08	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	520	0.1	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: 5/15/2023
	Site Name: Cabo Wabo Federal Com 24 B CTB	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024153	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122541,-103.940667	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	918	0.2	N	SS09	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	638	0.1	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: 5/15/2023
	Site Name: Cabo Wabo Federal Com 24 B CTB	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024153	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122446,-103.940913	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	700	0.1	N	SS10	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	840	0.2	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: 5/15/2023
	Site Name: Cabo Wabo Federal Com 24 B CTB	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024153	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122398,-103.940680	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	1170	0.2	N	SS11	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	252	0.2	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: 5/15/2023
	Site Name: Cabo Wabo Federal Com 24 B CTB	
	Incident Number: NAPP2301933240	
	Job Number: 03D2024153	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.122332,-103.940809	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	2374	0.1	N	SS12	0.2	0	CHHE	Caliche: off white, light tan/pinkish
Dry	520	0.2	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

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 2/27/2023 4:28:20 PM

JOB DESCRIPTION

Cabo Wabo 704-706 Frac Tank
SDG NUMBER 03D2024153

JOB NUMBER

890-4136-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

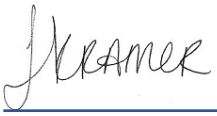
See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

Authorization



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2/27/2023 4:28:20 PM

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

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Laboratory Job ID: 890-4136-1
SDG: 03D2024153

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4136-1
Project/Site: Cabo Wabo 704-706 Frac Tank SDG: 03D2024153

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD 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 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Job ID: 890-4136-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4136-1

Receipt
The samples were received on 2/17/2023 3:27 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4136-1), SS02 (890-4136-2), SS03 (890-4136-3), SS04 (890-4136-4), SS05 (890-4136-5), SS06 (890-4136-6) and SS07 (890-4136-7).

GC VOA
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 RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-47003 and analytical batch 880-46994 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-47205 and analytical batch 880-47221 was outside the upper control 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 880-46849 and analytical batch 880-46986 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 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS01

Lab Sample ID: 890-4136-1
Matrix: Solid
Date Collected: 02/16/23 12:50
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/24/23 11:42	02/25/23 06:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 06:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 06:39	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/24/23 11:42	02/25/23 06:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 06:39	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/24/23 11:42	02/25/23 06:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*02/24/23 11:42*	*02/25/23 06:39*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*02/24/23 11:42*	*02/25/23 06:39*	*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			02/27/23 16:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3740**		50.0		mg/Kg			02/24/23 13:21	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 *1	50.0		mg/Kg		02/23/23 09:12	02/23/23 18:18	1
Diesel Range Organics (Over C10-C28)	**3740**	***1**	50.0		mg/Kg		02/23/23 09:12	02/23/23 18:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 09:12	02/23/23 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*02/23/23 09:12*	*02/23/23 18:18*	*1*
o-Terphenyl	*99*		*70 - 130*	*02/23/23 09:12*	*02/23/23 18:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7030**	**F1**	99.6		mg/Kg			02/23/23 05:50	20

Client Sample ID: SS02

Lab Sample ID: 890-4136-2
Matrix: Solid
Date Collected: 02/16/23 12:55
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/24/23 11:42	02/25/23 07:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 07:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 07:00	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/24/23 11:42	02/25/23 07:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 07:00	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/24/23 11:42	02/25/23 07:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/24/23 11:42*	*02/25/23 07:00*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS02

Lab Sample ID: 890-4136-2
Matrix: Solid
Date Collected: 02/16/23 12:55
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*02/24/23 11:42*	*02/25/23 07:00*	*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			02/27/23 16:41	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**487**		49.9	mg/Kg			02/24/23 13:21	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 *1	49.9	mg/Kg		02/23/23 09:12	02/23/23 18:40	1
Diesel Range Organics (Over C10-C28)	**487**	***1**	49.9	mg/Kg		02/23/23 09:12	02/23/23 18:40	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/23/23 09:12	02/23/23 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*02/23/23 09:12*	*02/23/23 18:40*	*1*
o-Terphenyl	*92*		*70 - 130*	*02/23/23 09:12*	*02/23/23 18:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**776**		25.0	mg/Kg			02/23/23 06:09	5

Client Sample ID: SS03

Lab Sample ID: 890-4136-3
Matrix: Solid
Date Collected: 02/16/23 13:00
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/24/23 11:42	02/25/23 07:20	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/24/23 11:42	02/25/23 07:20	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/24/23 11:42	02/25/23 07:20	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/24/23 11:42	02/25/23 07:20	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/24/23 11:42	02/25/23 07:20	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/24/23 11:42	02/25/23 07:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/24/23 11:42*	*02/25/23 07:20*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*02/24/23 11:42*	*02/25/23 07:20*	*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			02/27/23 16:41	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**78.3**		49.9	mg/Kg			02/24/23 13:40	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS03

Lab Sample ID: 890-4136-3
Matrix: Solid
Date Collected: 02/16/23 13:00
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/23/23 09:10	02/23/23 18:18	1
Diesel Range Organics (Over C10-C28)	**78.3**		49.9		mg/Kg		02/23/23 09:10	02/23/23 18:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 09:10	02/23/23 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*02/23/23 09:10*	*02/23/23 18:18*	*1*
o-Terphenyl	*86*		*70 - 130*	*02/23/23 09:10*	*02/23/23 18:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1530**		49.9		mg/Kg			02/23/23 06:15	10

Client Sample ID: SS04

Lab Sample ID: 890-4136-4
Matrix: Solid
Date Collected: 02/16/23 13:05
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/24/23 11:42	02/25/23 07:40	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 07:40	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 07:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/24/23 11:42	02/25/23 07:40	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 07:40	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/24/23 11:42	02/25/23 07:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/24/23 11:42*	*02/25/23 07:40*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*02/24/23 11:42*	*02/25/23 07:40*	*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			02/27/23 16:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**83.7**		49.9		mg/Kg			02/24/23 13:40	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		02/23/23 09:10	02/23/23 18:40	1
Diesel Range Organics (Over C10-C28)	**83.7**		49.9		mg/Kg		02/23/23 09:10	02/23/23 18:40	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 09:10	02/23/23 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*02/23/23 09:10*	*02/23/23 18:40*	*1*
o-Terphenyl	*83*		*70 - 130*	*02/23/23 09:10*	*02/23/23 18:40*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS04

Lab Sample ID: 890-4136-4
Matrix: Solid
Date Collected: 02/16/23 13:05
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	395		24.8		mg/Kg			02/23/23 06:21	5

Client Sample ID: SS05

Lab Sample ID: 890-4136-5
Matrix: Solid
Date Collected: 02/16/23 13:10
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/24/23 11:42	02/25/23 08:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 08:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 08:01	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/24/23 11:42	02/25/23 08:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 08:01	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/24/23 11:42	02/25/23 08:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*02/24/23 11:42*	*02/25/23 08:01*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*02/24/23 11:42*	*02/25/23 08:01*	*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			02/27/23 16:41	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			02/24/23 13:40	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	<49.8	U	49.8		mg/Kg		02/23/23 09:10	02/23/23 19:01	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		02/23/23 09:10	02/23/23 19:01	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/23/23 09:10	02/23/23 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*02/23/23 09:10*	*02/23/23 19:01*	*1*
o-Terphenyl	*81*		*70 - 130*	*02/23/23 09:10*	*02/23/23 19:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	152		25.0		mg/Kg			02/23/23 06:27	5

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS06

Lab Sample ID: 890-4136-6
Matrix: Solid
Date Collected: 02/16/23 13:15
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/24/23 11:42	02/25/23 08:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 08:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 08:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/24/23 11:42	02/25/23 08:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 08:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/24/23 11:42	02/25/23 08:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*02/24/23 11:42*	*02/25/23 08:22*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/24/23 11:42*	*02/25/23 08:22*	*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			02/27/23 16:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/24/23 13:40	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		02/23/23 09:10	02/23/23 19:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/23/23 09:10	02/23/23 19:23	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 09:10	02/23/23 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*02/23/23 09:10*	*02/23/23 19:23*	*1*
o-Terphenyl	*80*		*70 - 130*	*02/23/23 09:10*	*02/23/23 19:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**92.4**		4.97		mg/Kg			02/23/23 06:46	1

Client Sample ID: SS07

Lab Sample ID: 890-4136-7
Matrix: Solid
Date Collected: 02/16/23 13:20
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

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		02/24/23 11:42	02/25/23 08:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 08:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 08:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/24/23 11:42	02/25/23 08:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/24/23 11:42	02/25/23 08:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/24/23 11:42	02/25/23 08:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/24/23 11:42*	*02/25/23 08:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS07
Date Collected: 02/16/23 13:20
Date Received: 02/17/23 15:27
Sample Depth: 0.2'

Lab Sample ID: 890-4136-7
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*02/24/23 11:42*	*02/25/23 08:42*	*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			02/27/23 16:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**11.6**		49.9		mg/Kg			02/27/23 12:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/24/23 15:11	02/25/23 19:08	1
Diesel Range Organics (Over C10-C28)	**11.6**		49.9		mg/Kg		02/24/23 15:11	02/25/23 19:08	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/24/23 15:11	02/25/23 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*96*		*70 - 130*	*02/24/23 15:11*	*02/25/23 19:08*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/24/23 15:11*	*02/25/23 19:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**303**		25.0		mg/Kg			02/23/23 06:52	5

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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)
890-4136-1	SS01	108	87
890-4136-2	SS02	118	114
890-4136-3	SS03	113	113
890-4136-4	SS04	112	110
890-4136-5	SS05	117	112
890-4136-6	SS06	116	111
890-4136-7	SS07	119	106
890-4180-A-21-D MS	Matrix Spike	111	107
890-4180-A-21-E MSD	Matrix Spike Duplicate	110	114
LCS 880-47016/1-A	Lab Control Sample	108	112
LCSD 880-47016/2-A	Lab Control Sample Dup	109	109
MB 880-47016/5-B	Method Blank	102	100
MB 880-47145/5-A	Method Blank	107	103

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)
880-25053-A-41-E MS	Matrix Spike	111	111
880-25053-A-41-F MSD	Matrix Spike Duplicate	110	110
890-4123-A-1-F MS	Matrix Spike	107	102
890-4123-A-1-G MSD	Matrix Spike Duplicate	95	89
890-4134-A-1-D MS	Matrix Spike	85	82
890-4134-A-1-E MSD	Matrix Spike Duplicate	99	91
890-4136-1	SS01	90	99
890-4136-2	SS02	86	92
890-4136-3	SS03	84	86
890-4136-4	SS04	79	83
890-4136-5	SS05	78	81
890-4136-6	SS06	77	80
890-4136-7	SS07	96	97
LCS 880-47002/2-A	Lab Control Sample	103	113
LCS 880-47003/2-A	Lab Control Sample	107	116
LCS 880-47205/2-A	Lab Control Sample	117	117
LCSD 880-47002/3-A	Lab Control Sample Dup	101	102
LCSD 880-47003/3-A	Lab Control Sample Dup	75	85
LCSD 880-47205/3-A	Lab Control Sample Dup	130	125
MB 880-47002/1-A	Method Blank	112	126
MB 880-47003/1-A	Method Blank	110	131 S1+
MB 880-47205/1-A	Method Blank	147 S1+	155 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-47016/5-B
Matrix: Solid
Analysis Batch: 47140

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47016

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 01:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 01:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 01:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/24/23 11:42	02/25/23 01:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/24/23 11:42	02/25/23 01:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/24/23 11:42	02/25/23 01:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*02/24/23 11:42*	*02/25/23 01:15*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*02/24/23 11:42*	*02/25/23 01:15*	*1*

Lab Sample ID: LCS 880-47016/1-A
Matrix: Solid
Analysis Batch: 47140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47016

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08552		mg/Kg		86	70 - 130		
Toluene			0.100	0.08570		mg/Kg		86	70 - 130		
Ethylbenzene			0.100	0.08838		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1889		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09331		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-47016/2-A
Matrix: Solid
Analysis Batch: 47140

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47016

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09543		mg/Kg		95	70 - 130	11	35
Toluene			0.100	0.09362		mg/Kg		94	70 - 130	9	35
Ethylbenzene			0.100	0.09933		mg/Kg		99	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.2103		mg/Kg		105	70 - 130	11	35
o-Xylene			0.100	0.1034		mg/Kg		103	70 - 130	10	35

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

Lab Sample ID: 890-4180-A-21-D MS
Matrix: Solid
Analysis Batch: 47140

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0998	0.08050		mg/Kg		81	70 - 130		
Toluene	<0.00201	U	0.0998	0.07819		mg/Kg		78	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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

Lab Sample ID: 890-4180-A-21-D MS
Matrix: Solid
Analysis Batch: 47140

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0998	0.07809		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1638		mg/Kg		82	70 - 130
o-Xylene	<0.00201	U	0.0998	0.08111		mg/Kg		81	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-4180-A-21-E MSD
Matrix: Solid
Analysis Batch: 47140

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47016

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.09030		mg/Kg		91	70 - 130	11	35
Toluene	<0.00201	U	0.0990	0.08535		mg/Kg		86	70 - 130	9	35
Ethylbenzene	<0.00201	U	0.0990	0.08851		mg/Kg		89	70 - 130	13	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1865		mg/Kg		94	70 - 130	13	35
o-Xylene	<0.00201	U	0.0990	0.09194		mg/Kg		92	70 - 130	13	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: MB 880-47145/5-A
Matrix: Solid
Analysis Batch: 47140

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47145

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/24/23 09:38	02/24/23 13:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/24/23 09:38	02/24/23 13:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/24/23 09:38	02/24/23 13:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/24/23 09:38	02/24/23 13:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/24/23 09:38	02/24/23 13:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/24/23 09:38	02/24/23 13:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/24/23 09:38*	*02/24/23 13:39*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*02/24/23 09:38*	*02/24/23 13:39*	*1*

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

Lab Sample ID: MB 880-47002/1-A
Matrix: Solid
Analysis Batch: 46992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47002

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		02/23/23 09:10	02/23/23 08:36	1

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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

Lab Sample ID: MB 880-47002/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46992 — **Prep Batch: 47002**

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		02/23/23 09:10	02/23/23 08:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 09:10	02/23/23 08:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*02/23/23 09:10*	*02/23/23 08:36*	*1*
o-Terphenyl	*126*		*70 - 130*	*02/23/23 09:10*	*02/23/23 08:36*	*1*

Lab Sample ID: LCS 880-47002/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46992 — **Prep Batch: 47002**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	944.5		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1060		mg/Kg		106	70 - 130		

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

Lab Sample ID: LCSD 880-47002/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46992 — **Prep Batch: 47002**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	915.3		mg/Kg		92	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	906.8		mg/Kg		91	70 - 130	16	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: 890-4134-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46992 — **Prep Batch: 47002**

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	999	1134		mg/Kg		110	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	910.9		mg/Kg		91	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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

Lab Sample ID: 890-4134-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46992 — **Prep Batch: 47002**

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	1097		mg/Kg		107	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1021		mg/Kg		102	70 - 130	11	20

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

Lab Sample ID: MB 880-47003/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46994 — **Prep Batch: 47003**

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		02/23/23 09:12	02/23/23 08:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/23/23 09:12	02/23/23 08:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 09:12	02/23/23 08:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*02/23/23 09:12*	*02/23/23 08:36*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*02/23/23 09:12*	*02/23/23 08:36*	*1*

Lab Sample ID: LCS 880-47003/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46994 — **Prep Batch: 47003**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1174		mg/Kg		117	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1103		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*116*		*70 - 130*

Lab Sample ID: LCSD 880-47003/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46994 — **Prep Batch: 47003**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	908.0	*1	mg/Kg		91	70 - 130	26	20
Diesel Range Organics (Over C10-C28)			1000	806.6	*1	mg/Kg		81	70 - 130	31	20

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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

Lab Sample ID: LCSD 880-47003/3-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47003

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	75		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-4123-A-1-F MS
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47003

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 *1	999	1211		mg/Kg		119	70 - 130
Diesel Range Organics (Over C10-C28)	76.8	*1	999	1121		mg/Kg		105	70 - 130

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

Lab Sample ID: 890-4123-A-1-G MSD
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47003

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 *1	998	986.4		mg/Kg		97	70 - 130	20	20
Diesel Range Organics (Over C10-C28)	76.8	*1	998	993.4		mg/Kg		92	70 - 130	12	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: MB 880-47205/1-A
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47205

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		02/24/23 15:11	02/25/23 08:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/24/23 15:11	02/25/23 08:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/24/23 15:11	02/25/23 08:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	147	S1+	70 - 130	02/24/23 15:11	02/25/23 08:50	1
o-Terphenyl	155	S1+	70 - 130	02/24/23 15:11	02/25/23 08:50	1

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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

Lab Sample ID: LCS 880-47205/2-A
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47205

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	985.6		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1051		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Lab Sample ID: LCSD 880-47205/3-A
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47205

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	959.3		mg/Kg		96	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1125		mg/Kg		113	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*130*		*70 - 130*
o-Terphenyl	*125*		*70 - 130*

Lab Sample ID: 880-25053-A-41-E MS
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47205

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	1077		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1052		mg/Kg		106	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

Lab Sample ID: 880-25053-A-41-F MSD
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47205

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	1009		mg/Kg		98	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1045		mg/Kg		105	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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

Lab Sample ID: 880-25053-A-41-F MSD
Matrix: Solid
Analysis Batch: 47221

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47205

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	110		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46849/1-A
Matrix: Solid
Analysis Batch: 46986

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			02/23/23 05:32	1

Lab Sample ID: LCS 880-46849/2-A
Matrix: Solid
Analysis Batch: 46986

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	238.4		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-46849/3-A
Matrix: Solid
Analysis Batch: 46986

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	238.2		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 890-4136-1 MS
Matrix: Solid
Analysis Batch: 46986

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	7030	F1	4980	12940	F1	mg/Kg		119	90 - 110		

Lab Sample ID: 890-4136-1 MSD
Matrix: Solid
Analysis Batch: 46986

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7030	F1	4980	12970	F1	mg/Kg		119	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

GC VOA

Prep Batch: 47016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Total/NA	Solid	5035	
890-4136-2	SS02	Total/NA	Solid	5035	
890-4136-3	SS03	Total/NA	Solid	5035	
890-4136-4	SS04	Total/NA	Solid	5035	
890-4136-5	SS05	Total/NA	Solid	5035	
890-4136-6	SS06	Total/NA	Solid	5035	
890-4136-7	SS07	Total/NA	Solid	5035	
MB 880-47016/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-47016/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47016/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4180-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
890-4180-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 47140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Total/NA	Solid	8021B	47016
890-4136-2	SS02	Total/NA	Solid	8021B	47016
890-4136-3	SS03	Total/NA	Solid	8021B	47016
890-4136-4	SS04	Total/NA	Solid	8021B	47016
890-4136-5	SS05	Total/NA	Solid	8021B	47016
890-4136-6	SS06	Total/NA	Solid	8021B	47016
890-4136-7	SS07	Total/NA	Solid	8021B	47016
MB 880-47016/5-B	Method Blank	Total/NA	Solid	8021B	47016
MB 880-47145/5-A	Method Blank	Total/NA	Solid	8021B	47145
LCS 880-47016/1-A	Lab Control Sample	Total/NA	Solid	8021B	47016
LCSD 880-47016/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47016
890-4180-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	47016
890-4180-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47016

Prep Batch: 47145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47145/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 47361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Total/NA	Solid	Total BTEX	
890-4136-2	SS02	Total/NA	Solid	Total BTEX	
890-4136-3	SS03	Total/NA	Solid	Total BTEX	
890-4136-4	SS04	Total/NA	Solid	Total BTEX	
890-4136-5	SS05	Total/NA	Solid	Total BTEX	
890-4136-6	SS06	Total/NA	Solid	Total BTEX	
890-4136-7	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 46992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-3	SS03	Total/NA	Solid	8015B NM	47002
890-4136-4	SS04	Total/NA	Solid	8015B NM	47002
890-4136-5	SS05	Total/NA	Solid	8015B NM	47002
890-4136-6	SS06	Total/NA	Solid	8015B NM	47002

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

GC Semi VOA (Continued)

Analysis Batch: 46992 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47002/1-A	Method Blank	Total/NA	Solid	8015B NM	47002
LCS 880-47002/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47002
LCSD 880-47002/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47002
890-4134-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	47002
890-4134-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47002

Analysis Batch: 46994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Total/NA	Solid	8015B NM	47003
890-4136-2	SS02	Total/NA	Solid	8015B NM	47003
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015B NM	47003
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47003
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47003
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	47003
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47003

Prep Batch: 47002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-3	SS03	Total/NA	Solid	8015NM Prep	
890-4136-4	SS04	Total/NA	Solid	8015NM Prep	
890-4136-5	SS05	Total/NA	Solid	8015NM Prep	
890-4136-6	SS06	Total/NA	Solid	8015NM Prep	
MB 880-47002/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47002/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47002/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4134-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4134-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 47003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Total/NA	Solid	8015NM Prep	
890-4136-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 47167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Total/NA	Solid	8015 NM	
890-4136-2	SS02	Total/NA	Solid	8015 NM	
890-4136-3	SS03	Total/NA	Solid	8015 NM	
890-4136-4	SS04	Total/NA	Solid	8015 NM	
890-4136-5	SS05	Total/NA	Solid	8015 NM	
890-4136-6	SS06	Total/NA	Solid	8015 NM	
890-4136-7	SS07	Total/NA	Solid	8015 NM	

Prep Batch: 47205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-7	SS07	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

GC Semi VOA (Continued)

Prep Batch: 47205 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47205/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47205/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47205/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-25053-A-41-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-25053-A-41-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 47221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-7	SS07	Total/NA	Solid	8015B NM	47205
MB 880-47205/1-A	Method Blank	Total/NA	Solid	8015B NM	47205
LCS 880-47205/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47205
LCSD 880-47205/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47205
880-25053-A-41-E MS	Matrix Spike	Total/NA	Solid	8015B NM	47205
880-25053-A-41-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47205

HPLC/IC

Leach Batch: 46849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Soluble	Solid	DI Leach	
890-4136-2	SS02	Soluble	Solid	DI Leach	
890-4136-3	SS03	Soluble	Solid	DI Leach	
890-4136-4	SS04	Soluble	Solid	DI Leach	
890-4136-5	SS05	Soluble	Solid	DI Leach	
890-4136-6	SS06	Soluble	Solid	DI Leach	
890-4136-7	SS07	Soluble	Solid	DI Leach	
MB 880-46849/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46849/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46849/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4136-1 MS	SS01	Soluble	Solid	DI Leach	
890-4136-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 46986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4136-1	SS01	Soluble	Solid	300.0	46849
890-4136-2	SS02	Soluble	Solid	300.0	46849
890-4136-3	SS03	Soluble	Solid	300.0	46849
890-4136-4	SS04	Soluble	Solid	300.0	46849
890-4136-5	SS05	Soluble	Solid	300.0	46849
890-4136-6	SS06	Soluble	Solid	300.0	46849
890-4136-7	SS07	Soluble	Solid	300.0	46849
MB 880-46849/1-A	Method Blank	Soluble	Solid	300.0	46849
LCS 880-46849/2-A	Lab Control Sample	Soluble	Solid	300.0	46849
LCSD 880-46849/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46849
890-4136-1 MS	SS01	Soluble	Solid	300.0	46849
890-4136-1 MSD	SS01	Soluble	Solid	300.0	46849

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS01

Lab Sample ID: 890-4136-1
Matrix: Solid
Date Collected: 02/16/23 12:50
Date Received: 02/17/23 15:27

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	47016	02/24/23 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/25/23 06:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47361	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47167	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 18:18	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	46849	02/21/23 13:17	KS	EET MID
Soluble	Analysis	300.0		20			46986	02/23/23 05:50	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-4136-2
Matrix: Solid
Date Collected: 02/16/23 12:55
Date Received: 02/17/23 15:27

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	47016	02/24/23 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/25/23 07:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47361	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47167	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 18:40	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	46849	02/21/23 13:17	KS	EET MID
Soluble	Analysis	300.0		5			46986	02/23/23 06:09	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-4136-3
Matrix: Solid
Date Collected: 02/16/23 13:00
Date Received: 02/17/23 15:27

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	47016	02/24/23 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/25/23 07:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47361	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47167	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47002	02/23/23 09:10	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/23/23 18:18	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	46849	02/21/23 13:17	KS	EET MID
Soluble	Analysis	300.0		10			46986	02/23/23 06:15	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-4136-4
Matrix: Solid
Date Collected: 02/16/23 13:05
Date Received: 02/17/23 15:27

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	47016	02/24/23 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/25/23 07:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47361	02/27/23 16:41	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS04
Date Collected: 02/16/23 13:05
Date Received: 02/17/23 15:27

Lab Sample ID: 890-4136-4
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			47167	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47002	02/23/23 09:10	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/23/23 18:40	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	46849	02/21/23 13:17	KS	EET MID
Soluble	Analysis	300.0		5			46986	02/23/23 06:21	CH	EET MID

Client Sample ID: SS05
Date Collected: 02/16/23 13:10
Date Received: 02/17/23 15:27

Lab Sample ID: 890-4136-5
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	47016	02/24/23 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/25/23 08:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47361	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47167	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	47002	02/23/23 09:10	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/23/23 19:01	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	46849	02/21/23 13:17	KS	EET MID
Soluble	Analysis	300.0		5			46986	02/23/23 06:27	CH	EET MID

Client Sample ID: SS06
Date Collected: 02/16/23 13:15
Date Received: 02/17/23 15:27

Lab Sample ID: 890-4136-6
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	47016	02/24/23 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/25/23 08:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47361	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47167	02/24/23 13:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47002	02/23/23 09:10	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46992	02/23/23 19:23	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	46849	02/21/23 13:17	KS	EET MID
Soluble	Analysis	300.0		1			46986	02/23/23 06:46	CH	EET MID

Client Sample ID: SS07
Date Collected: 02/16/23 13:20
Date Received: 02/17/23 15:27

Lab Sample ID: 890-4136-7
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	47016	02/24/23 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47140	02/25/23 08:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47361	02/27/23 16:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			47167	02/27/23 12:30	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47205	02/24/23 15:11	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47221	02/25/23 19:08	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Client Sample ID: SS07

Date Collected: 02/16/23 13:20
Date Received: 02/17/23 15:27

Lab Sample ID: 890-4136-7

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	46849	02/21/23 13:17	KS	EET MID
Soluble	Analysis	300.0		5			46986	02/23/23 06:52	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 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

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 704-706 Frac Tank

Job ID: 890-4136-1
SDG: 03D2024153

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4136-1	SS01	Solid	02/16/23 12:50	02/17/23 15:27	0.2'
890-4136-2	SS02	Solid	02/16/23 12:55	02/17/23 15:27	0.2'
890-4136-3	SS03	Solid	02/16/23 13:00	02/17/23 15:27	0.2'
890-4136-4	SS04	Solid	02/16/23 13:05	02/17/23 15:27	0.2'
890-4136-5	SS05	Solid	02/16/23 13:10	02/17/23 15:27	0.2'
890-4136-6	SS06	Solid	02/16/23 13:15	02/17/23 15:27	0.2'
890-4136-7	SS07	Solid	02/16/23 13:20	02/17/23 15:27	0.2'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	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:	kjennings@ensolum.com, 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 704-706 Frac Tank	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024153	Due Date:	
Project Location:	32.1222,-103.9408	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:	TNM-EC
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

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
SS01	Soil	2/16/2023	1250	0.2'	Comp	1		x	x	x	
SS02	Soil	2/16/2023	1255	0.2'	Comp	1		x	x	x	
SS03	Soil	2/16/2023	1300	0.2'	Comp	1		x	x	x	
SS04	Soil	2/16/2023	1305	0.2'	Comp	1		x	x	x	
SS05	Soil	2/16/2023	1310	0.2'	Comp	1		x	x	x	
SS06	Soil	2/16/2023	1315	0.2'	Comp	1		x	x	x	
SS07	Soil	2/16/2023	1320	0.2'	Comp	1		x	x	x	

890-4136 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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		2.17.23 15:27	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4136-1
SDG Number: 03D2024153

Login Number: 4136
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: 890-4136-1
SDG Number: 03D2024153

Login Number: 4136
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 02/21/23 11:18 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/22/2023 4:49:13 PM

JOB DESCRIPTION

Cabo Wabo Federal 24 CTB
SDG NUMBER 03D2024153

JOB NUMBER

890-4666-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

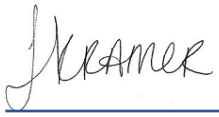
Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Laboratory Job ID: 890-4666-1
SDG: 03D2024153

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Job ID: 890-4666-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4666-1

Receipt
The samples were received on 5/15/2023 4:17 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4666-1), FS02 (890-4666-2), FS03 (890-4666-3), FS04 (890-4666-4), FS05 (890-4666-5), FS06 (890-4666-6), FS07 (890-4666-7), FS08 (890-4666-8), FS09 (890-4666-9), FS10 (890-4666-10), SS02A (890-4666-11), SS03A (890-4666-12), SS08 (890-4666-13), SS08A (890-4666-14), SS09 (890-4666-15), SS09A (890-4666-16), SS10 (890-4666-17), SS10A (890-4666-18), SS11 (890-4666-19), SS11A (890-4666-20), SS12 (890-4666-21) and SS12A (890-4666-22).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53588 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total. The samples associated with this CCV were non-detects for the affected analytes

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS12 (890-4666-21) and SS12A (890-4666-22). 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: (CCV 880-53588/2), (CCV 880-53588/20), (CCV 880-53588/33), (CCV 880-53588/51), (LCS 880-53497/1-A) and (LCSD 880-53497/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-4660-A-1-I). 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: (890-4660-A-1-G MS) and (890-4660-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-53497 and analytical batch 880-53588 recovered outside control limits for the following analytes: Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53497 and analytical batch 880-53588 were outside control limits for one or more analytes. These analytes were biased high and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53605 and analytical batch 880-53790 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: The surrogate recovery for the blank associated with preparation batch 880-53604 and analytical batch 880-53790 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS05 (890-4666-5), FS08 (890-4666-8), FS09 (890-4666-9), SS08 (890-4666-13), SS08A (890-4666-14), SS11 (890-4666-19) and SS11A (890-4666-20). 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: FS06 (890-4666-6) and FS10 (890-4666-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Job ID: 890-4666-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS09A (890-4666-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-53605 and analytical batch 880-53790 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.

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53599 and analytical batch 880-53552 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS08A (890-4666-14). 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 880-53630 and analytical batch 880-53625 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-28483-A-33-B). 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: SS12 (890-4666-21). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-53630 and analytical batch 880-53625 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 880-53480 and analytical batch 880-53675 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 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS01

Date Collected: 05/15/23 10:05
Date Received: 05/15/23 16:17
Sample Depth: 0.5

Lab Sample ID: 890-4666-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2 F1	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:52	1
Toluene	<0.00200	U F2 F1	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:52	1
Ethylbenzene	<0.00200	U F2 F1	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:52	1
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.00399		mg/Kg		05/17/23 14:58	05/20/23 22:52	1
o-Xylene	<0.00200	U F2 F1	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:52	1
Xylenes, Total	<0.00399	U F2 F1	0.00399		mg/Kg		05/17/23 14:58	05/20/23 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*05/17/23 14:58*	*05/20/23 22:52*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*05/17/23 14:58*	*05/20/23 22:52*	*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 16:14	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		05/17/23 12:36	05/17/23 20:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/17/23 20:52	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/17/23 20:52	1
Total TPH	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/17/23 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/17/23 12:36*	*05/17/23 20:52*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/17/23 12:36*	*05/17/23 20:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3090**	**F1**	24.9		mg/Kg			05/18/23 17:55	5

Client Sample ID: FS02

Date Collected: 05/15/23 10:10
Date Received: 05/15/23 16:17
Sample Depth: 0.5

Lab Sample ID: 890-4666-2
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		05/17/23 14:58	05/20/23 23:18	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/20/23 23:18	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/20/23 23:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/17/23 14:58	05/20/23 23:18	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/20/23 23:18	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/17/23 14:58	05/20/23 23:18	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS02

Lab Sample ID: 890-4666-2
Matrix: Solid
Date Collected: 05/15/23 10:10
Date Received: 05/15/23 16:17
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/17/23 14:58*	*05/20/23 23:18*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*05/17/23 14:58*	*05/20/23 23:18*	*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 16:14	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			05/18/23 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	<49.8	U	49.8	mg/Kg		05/17/23 12:36	05/17/23 21:57	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/17/23 12:36	05/17/23 21:57	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/17/23 12:36	05/17/23 21:57	1
Total TPH	<49.8	U	49.8	mg/Kg		05/17/23 12:36	05/17/23 21:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*97*		*70 - 130*	*05/17/23 12:36*	*05/17/23 21:57*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/17/23 12:36*	*05/17/23 21:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**849**		25.2	mg/Kg			05/18/23 18:39	5

Client Sample ID: FS03

Lab Sample ID: 890-4666-3
Matrix: Solid
Date Collected: 05/15/23 10:15
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/17/23 14:58	05/20/23 23:45	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/17/23 14:58	05/20/23 23:45	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/17/23 14:58	05/20/23 23:45	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/17/23 14:58	05/20/23 23:45	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/17/23 14:58	05/20/23 23:45	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/17/23 14:58	05/20/23 23:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*05/17/23 14:58*	*05/20/23 23:45*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*05/17/23 14:58*	*05/20/23 23:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			05/22/23 16:14	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS03

Lab Sample ID: 890-4666-3
Matrix: Solid
Date Collected: 05/15/23 10:15
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			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	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 22:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 22:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 22:19	1
Total TPH	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 22:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/17/23 12:36*	*05/17/23 22:19*	*1*
o-Terphenyl	*124*		*70 - 130*	*05/17/23 12:36*	*05/17/23 22:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**654**		5.02		mg/Kg			05/18/23 18:44	1

Client Sample ID: FS04

Lab Sample ID: 890-4666-4
Matrix: Solid
Date Collected: 05/15/23 10:20
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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		05/17/23 14:58	05/21/23 00:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 00:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 00:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 00:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 00:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/17/23 14:58*	*05/21/23 00:11*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*05/17/23 14:58*	*05/21/23 00:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/22/23 16:14	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			05/18/23 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	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/17/23 22:40	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/17/23 22:40	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/17/23 22:40	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS04

Lab Sample ID: 890-4666-4
Matrix: Solid
Date Collected: 05/15/23 10:20
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/17/23 22:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/17/23 12:36*	*05/17/23 22:40*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/17/23 12:36*	*05/17/23 22:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2040**		24.9		mg/Kg			05/18/23 18:49	5

Client Sample ID: FS05

Lab Sample ID: 890-4666-5
Matrix: Solid
Date Collected: 05/15/23 10:25
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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		05/17/23 14:58	05/21/23 00:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 00:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 00:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 00:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 00:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 00:38*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/17/23 14:58*	*05/21/23 00:38*	*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 16:14	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			05/18/23 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	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:02	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:02	1
Total TPH	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/17/23 12:36*	*05/17/23 23:02*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/17/23 12:36*	*05/17/23 23:02*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS05

Lab Sample ID: 890-4666-5
Matrix: Solid
Date Collected: 05/15/23 10:25
Date Received: 05/15/23 16:17
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1740		25.1		mg/Kg			05/18/23 18:55	5

Client Sample ID: FS06

Lab Sample ID: 890-4666-6
Matrix: Solid
Date Collected: 05/15/23 10:30
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/17/23 14:58	05/21/23 01:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:04	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/17/23 14:58	05/21/23 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 01:04*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/17/23 14:58*	*05/21/23 01:04*	*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 16:14	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			05/18/23 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	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:23	1
Total TPH	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/17/23 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/17/23 12:36*	*05/17/23 23:23*	*1*
o-Terphenyl	*109*		*70 - 130*	*05/17/23 12:36*	*05/17/23 23:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	598		24.8		mg/Kg			05/18/23 19:11	5

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS07

Lab Sample ID: 890-4666-7
Matrix: Solid
Date Collected: 05/15/23 10:35
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:31	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/17/23 14:58	05/21/23 01:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 01:31	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/17/23 14:58	05/21/23 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*05/17/23 14:58*	*05/21/23 01:31*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*05/17/23 14:58*	*05/21/23 01:31*	*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 16:14	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		05/17/23 12:36	05/17/23 23:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/17/23 23:45	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/17/23 23:45	1
Total TPH	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/17/23 23:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/17/23 12:36*	*05/17/23 23:45*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/17/23 12:36*	*05/17/23 23:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1430**		24.8		mg/Kg			05/18/23 19:16	5

Client Sample ID: FS08

Lab Sample ID: 890-4666-8
Matrix: Solid
Date Collected: 05/15/23 10:40
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/17/23 14:58	05/21/23 01:57	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/17/23 14:58	05/21/23 01:57	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/17/23 14:58	05/21/23 01:57	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/17/23 14:58	05/21/23 01:57	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/17/23 14:58	05/21/23 01:57	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/17/23 14:58	05/21/23 01:57	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS08

Lab Sample ID: 890-4666-8
Matrix: Solid
Date Collected: 05/15/23 10:40
Date Received: 05/15/23 16:17
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 01:57*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/17/23 14:58*	*05/21/23 01:57*	*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			05/22/23 16:14	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			05/18/23 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	<50.0	U	50.0	mg/Kg		05/17/23 12:36	05/18/23 00:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/17/23 12:36	05/18/23 00:06	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/17/23 12:36	05/18/23 00:06	1
Total TPH	<50.0	U	50.0	mg/Kg		05/17/23 12:36	05/18/23 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*100*		*70 - 130*	*05/17/23 12:36*	*05/18/23 00:06*	*1*
o-Terphenyl	*112*		*70 - 130*	*05/17/23 12:36*	*05/18/23 00:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**627**		25.3	mg/Kg			05/18/23 19:22	5

Client Sample ID: FS09

Lab Sample ID: 890-4666-9
Matrix: Solid
Date Collected: 05/15/23 10:45
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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		05/17/23 14:58	05/21/23 02:24	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/17/23 14:58	05/21/23 02:24	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/17/23 14:58	05/21/23 02:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/17/23 14:58	05/21/23 02:24	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/17/23 14:58	05/21/23 02:24	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/17/23 14:58	05/21/23 02:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 02:24*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/17/23 14:58*	*05/21/23 02:24*	*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 16:14	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS09

Lab Sample ID: 890-4666-9
Matrix: Solid
Date Collected: 05/15/23 10:45
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			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		05/17/23 12:36	05/18/23 00:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 00:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 00:27	1
Total TPH	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/17/23 12:36*	*05/18/23 00:27*	*1*
o-Terphenyl	*112*		*70 - 130*	*05/17/23 12:36*	*05/18/23 00:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2620**		25.3		mg/Kg			05/18/23 19:27	5

Client Sample ID: FS10

Lab Sample ID: 890-4666-10
Matrix: Solid
Date Collected: 05/15/23 10:50
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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		05/17/23 14:58	05/21/23 02:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 02:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 02:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 02:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 02:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 02:50*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/17/23 14:58*	*05/21/23 02:50*	*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 16:14	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		05/17/23 12:36	05/18/23 00:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 00:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 00:48	1

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Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS10

Lab Sample ID: 890-4666-10
Matrix: Solid
Date Collected: 05/15/23 10:50
Date Received: 05/15/23 16:17
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/17/23 12:36*	*05/18/23 00:48*	*1*
o-Terphenyl	*112*		*70 - 130*	*05/17/23 12:36*	*05/18/23 00:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**287**		4.98		mg/Kg			05/18/23 19:32	1

Client Sample ID: SS02A

Lab Sample ID: 890-4666-11
Matrix: Solid
Date Collected: 05/15/23 11:35
Date Received: 05/15/23 16:17
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 04:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 04:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 04:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/17/23 14:58	05/21/23 04:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 04:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/17/23 14:58	05/21/23 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*05/17/23 14:58*	*05/21/23 04:37*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*05/17/23 14:58*	*05/21/23 04:37*	*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 16:14	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		05/17/23 12:36	05/18/23 01:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 01:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 01:31	1
Total TPH	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*05/17/23 12:36*	*05/18/23 01:31*	*1*
o-Terphenyl	*109*		*70 - 130*	*05/17/23 12:36*	*05/18/23 01:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS02A

Lab Sample ID: 890-4666-11
Matrix: Solid
Date Collected: 05/15/23 11:35
Date Received: 05/15/23 16:17
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1050**		25.2		mg/Kg			05/18/23 19:38	5

Client Sample ID: SS03A

Lab Sample ID: 890-4666-12
Matrix: Solid
Date Collected: 05/15/23 11:40
Date Received: 05/15/23 16:17
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 05:04	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 05:04	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 05:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/17/23 14:58	05/21/23 05:04	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 05:04	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/17/23 14:58	05/21/23 05:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*05/17/23 14:58*	*05/21/23 05:04*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/17/23 14:58*	*05/21/23 05:04*	*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 16:14	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			05/18/23 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	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/18/23 01:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/18/23 01:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/18/23 01:52	1
Total TPH	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/18/23 01:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/17/23 12:36*	*05/18/23 01:52*	*1*
o-Terphenyl	*112*		*70 - 130*	*05/17/23 12:36*	*05/18/23 01:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**701**		25.1		mg/Kg			05/18/23 19:54	5

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS08

Lab Sample ID: 890-4666-13
Matrix: Solid
Date Collected: 05/15/23 11:45
Date Received: 05/15/23 16:17
Sample Depth: 0.2

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		05/17/23 14:58	05/21/23 05:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 05:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 05:30	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/17/23 14:58	05/21/23 05:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 05:30	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/17/23 14:58	05/21/23 05:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 05:30*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/17/23 14:58*	*05/21/23 05:30*	*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 16:14	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			05/18/23 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	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 02:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 02:13	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 02:13	1
Total TPH	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/17/23 12:36*	*05/18/23 02:13*	*1*
o-Terphenyl	*112*		*70 - 130*	*05/17/23 12:36*	*05/18/23 02:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**892**		24.9		mg/Kg			05/18/23 19:59	5

Client Sample ID: SS08A

Lab Sample ID: 890-4666-14
Matrix: Solid
Date Collected: 05/15/23 11:50
Date Received: 05/15/23 16:17
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 05:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 05:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 05:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 05:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 05:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 05:57	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS08A

Lab Sample ID: 890-4666-14
Matrix: Solid
Date Collected: 05/15/23 11:50
Date Received: 05/15/23 16:17
Sample Depth: 1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	143	S1+	70 - 130	05/17/23 14:58	05/21/23 05:57	1
1,4-Difluorobenzene (Surr)	90		70 - 130	05/17/23 14:58	05/21/23 05:57	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 16:14	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		05/17/23 12:36	05/18/23 02:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 02:35	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 02:35	1
Total TPH	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 02:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130	05/17/23 12:36	05/18/23 02:35	1
o-Terphenyl	131	S1+	70 - 130	05/17/23 12:36	05/18/23 02:35	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**420**		4.96		mg/Kg			05/18/23 20:15	1

Client Sample ID: SS09

Lab Sample ID: 890-4666-15
Matrix: Solid
Date Collected: 05/15/23 11:55
Date Received: 05/15/23 16:17
Sample Depth: 0.2

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		05/17/23 14:58	05/21/23 06:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 06:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 06:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 06:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 06:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 06:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130	05/17/23 14:58	05/21/23 06:24	1
1,4-Difluorobenzene (Surr)	81		70 - 130	05/17/23 14:58	05/21/23 06:24	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 16:14	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS09

Date Collected: 05/15/23 11:55
Date Received: 05/15/23 16:17
Sample Depth: 0.2

Lab Sample ID: 890-4666-15
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**78.3**		50.0		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	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/18/23 02:56	1
Diesel Range Organics (Over C10-C28)	**78.3**		50.0		mg/Kg		05/17/23 12:36	05/18/23 02:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/23 12:36	05/18/23 02:56	1
Total TPH	**78.3**		50.0		mg/Kg		05/17/23 12:36	05/18/23 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*05/17/23 12:36*	*05/18/23 02:56*	*1*
o-Terphenyl	*130*		*70 - 130*	*05/17/23 12:36*	*05/18/23 02:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1740**		25.2		mg/Kg			05/18/23 20:20	5

Client Sample ID: SS09A

Date Collected: 05/15/23 12:00
Date Received: 05/15/23 16:17
Sample Depth: 1

Lab Sample ID: 890-4666-16
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		05/17/23 14:58	05/21/23 06:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 06:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 06:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 06:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 06:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 06:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 06:51*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*05/17/23 14:58*	*05/21/23 06:51*	*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 16:14	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			05/18/23 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	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:18	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:18	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:18	1

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Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS09A

Lab Sample ID: 890-4666-16
Matrix: Solid
Date Collected: 05/15/23 12:00
Date Received: 05/15/23 16:17
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/17/23 12:36*	*05/18/23 03:18*	*1*
o-Terphenyl	*111*		*70 - 130*	*05/17/23 12:36*	*05/18/23 03:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**804**		25.1		mg/Kg			05/18/23 20:26	5

Client Sample ID: SS10

Lab Sample ID: 890-4666-17
Matrix: Solid
Date Collected: 05/15/23 12:05
Date Received: 05/15/23 16:17
Sample Depth: 0.2

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		05/17/23 14:58	05/21/23 07:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 07:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 07:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/17/23 14:58	05/21/23 07:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 07:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/17/23 14:58	05/21/23 07:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*05/17/23 14:58*	*05/21/23 07:19*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*05/17/23 14:58*	*05/21/23 07:19*	*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 16:14	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			05/18/23 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	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:39	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:39	1
Total TPH	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 03:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/17/23 12:36*	*05/18/23 03:39*	*1*
o-Terphenyl	*110*		*70 - 130*	*05/17/23 12:36*	*05/18/23 03:39*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS10

Lab Sample ID: 890-4666-17
Matrix: Solid
Date Collected: 05/15/23 12:05
Date Received: 05/15/23 16:17
Sample Depth: 0.2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	635		4.99		mg/Kg			05/18/23 20:31	1

Client Sample ID: SS10A

Lab Sample ID: 890-4666-18
Matrix: Solid
Date Collected: 05/15/23 12:10
Date Received: 05/15/23 16:17
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 07:46	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 07:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 07:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/17/23 14:58	05/21/23 07:46	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/17/23 14:58	05/21/23 07:46	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/17/23 14:58	05/21/23 07:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*05/17/23 14:58*	*05/21/23 07:46*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/17/23 14:58*	*05/21/23 07:46*	*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 16:14	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		05/17/23 12:36	05/18/23 04:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 04:00	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 04:00	1
Total TPH	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 04:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*05/17/23 12:36*	*05/18/23 04:00*	*1*
o-Terphenyl	*129*		*70 - 130*	*05/17/23 12:36*	*05/18/23 04:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	809		4.98		mg/Kg			05/19/23 10:53	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS11

Lab Sample ID: 890-4666-19
Matrix: Solid
Date Collected: 05/15/23 12:15
Date Received: 05/15/23 16:17
Sample Depth: 0.2

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		05/17/23 14:58	05/21/23 08:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 08:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 08:14	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/17/23 14:58	05/21/23 08:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/21/23 08:14	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/17/23 14:58	05/21/23 08:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 08:14*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/17/23 14:58*	*05/21/23 08:14*	*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 16:14	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			05/18/23 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	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 04:22	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 04:22	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 04:22	1
Total TPH	<49.8	U	49.8		mg/Kg		05/17/23 12:36	05/18/23 04:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*05/17/23 12:36*	*05/18/23 04:22*	*1*
o-Terphenyl	*94*		*70 - 130*	*05/17/23 12:36*	*05/18/23 04:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1400**		25.0		mg/Kg			05/19/23 10:59	5

Client Sample ID: SS11A

Lab Sample ID: 890-4666-20
Matrix: Solid
Date Collected: 05/15/23 12:20
Date Received: 05/15/23 16:17
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 08:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 08:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 08:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 08:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/17/23 14:58	05/21/23 08:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/17/23 14:58	05/21/23 08:41	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS11A

Lab Sample ID: 890-4666-20
Matrix: Solid
Date Collected: 05/15/23 12:20
Date Received: 05/15/23 16:17
Sample Depth: 1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*05/17/23 14:58*	*05/21/23 08:41*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*05/17/23 14:58*	*05/21/23 08:41*	*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 16:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**54.6**		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		05/17/23 12:36	05/18/23 04:43	1
Diesel Range Organics (Over C10-C28)	**54.6**		49.9		mg/Kg		05/17/23 12:36	05/18/23 04:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/23 12:36	05/18/23 04:43	1
Total TPH	**54.6**		49.9		mg/Kg		05/17/23 12:36	05/18/23 04:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*103*		*70 - 130*	*05/17/23 12:36*	*05/18/23 04:43*	*1*
o-Terphenyl	*110*		*70 - 130*	*05/17/23 12:36*	*05/18/23 04:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**246**		4.96		mg/Kg			05/19/23 11:04	1

Client Sample ID: SS12

Lab Sample ID: 890-4666-21
Matrix: Solid
Date Collected: 05/15/23 12:25
Date Received: 05/15/23 16:17
Sample Depth: 0.2

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 15:29	05/18/23 13:39	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 13:39	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 13:39	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 13:39	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 13:39	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*190*	*S1+*	*70 - 130*	*05/16/23 15:29*	*05/18/23 13:39*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*05/16/23 15:29*	*05/18/23 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			05/18/23 15:49	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS12

Lab Sample ID: 890-4666-21
Matrix: Solid
Date Collected: 05/15/23 12:25
Date Received: 05/15/23 16:17
Sample Depth: 0.2

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			05/19/23 10:11	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		05/18/23 08:49	05/18/23 19:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/18/23 08:49	05/18/23 19:01	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/18/23 08:49	05/18/23 19:01	1
Total TPH	<49.9	U	49.9		mg/Kg		05/18/23 08:49	05/18/23 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*05/18/23 08:49*	*05/18/23 19:01*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/18/23 08:49*	*05/18/23 19:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2260**		25.0		mg/Kg			05/18/23 16:51	5

Client Sample ID: SS12A

Lab Sample ID: 890-4666-22
Matrix: Solid
Date Collected: 05/15/23 12:30
Date Received: 05/15/23 16:17
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 14:05	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 14:05	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 14:05	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 14:05	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		05/16/23 15:29	05/18/23 14:05	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		05/16/23 15:29	05/18/23 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*217*	*S1+*	*70 - 130*	*05/16/23 15:29*	*05/18/23 14:05*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*05/16/23 15:29*	*05/18/23 14:05*	*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			05/18/23 15:49	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			05/19/23 10:11	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		05/18/23 08:49	05/18/23 19:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/18/23 08:49	05/18/23 19:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/18/23 08:49	05/18/23 19:23	1

Client Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS12A

Date Collected: 05/15/23 12:30
Date Received: 05/15/23 16:17
Sample Depth: 1

Lab Sample ID: 890-4666-22

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg		05/18/23 08:49	05/18/23 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*05/18/23 08:49*	*05/18/23 19:23*	*1*
o-Terphenyl	*98*		*70 - 130*	*05/18/23 08:49*	*05/18/23 19:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**732**		4.98		mg/Kg			05/18/23 16:56	1

Surrogate Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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)
890-4660-A-1-G MS	Matrix Spike	203 S1+	103
890-4660-A-1-H MSD	Matrix Spike Duplicate	173 S1+	91
890-4666-1	FS01	114	79
890-4666-1 MS	FS01	124	122
890-4666-1 MSD	FS01	128	146 S1+
890-4666-2	FS02	122	82
890-4666-3	FS03	119	81
890-4666-4	FS04	122	83
890-4666-5	FS05	136 S1+	86
890-4666-6	FS06	147 S1+	96
890-4666-7	FS07	127	89
890-4666-8	FS08	137 S1+	94
890-4666-9	FS09	133 S1+	94
890-4666-10	FS10	131 S1+	90
890-4666-11	SS02A	124	81
890-4666-12	SS03A	127	90
890-4666-13	SS08	136 S1+	87
890-4666-14	SS08A	143 S1+	90
890-4666-15	SS09	127	81
890-4666-16	SS09A	131 S1+	85
890-4666-17	SS10	125	85
890-4666-18	SS10A	120	87
890-4666-19	SS11	134 S1+	86
890-4666-20	SS11A	133 S1+	85
890-4666-21	SS12	190 S1+	70
890-4666-22	SS12A	217 S1+	83
LCS 880-53497/1-A	Lab Control Sample	196 S1+	93
LCS 880-53605/1-A	Lab Control Sample	106	94
LCSD 880-53497/2-A	Lab Control Sample Dup	198 S1+	88
LCSD 880-53605/2-A	Lab Control Sample Dup	119	94
MB 880-53497/5-A	Method Blank	106	76
MB 880-53508/5-A	Method Blank	102	80
MB 880-53604/5-A	Method Blank	67 S1-	82
MB 880-53605/5-A	Method Blank	75	84

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)
880-28483-A-33-C MS	Matrix Spike	124	85
880-28483-A-33-D MSD	Matrix Spike Duplicate	127	86
890-4666-1	FS01	102	114
890-4666-1 MS	FS01	110	108
890-4666-1 MSD	FS01	115	114

Surrogate Summary

Client: Ensolum Job ID: 890-4666-1
Project/Site: Cabo Wabo Federal 24 CTB SDG: 03D2024153

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-4666-2	FS02	97	105										
890-4666-3	FS03	112	124										
890-4666-4	FS04	95	106										
890-4666-5	FS05	96	106										
890-4666-6	FS06	98	109										
890-4666-7	FS07	95	104										
890-4666-8	FS08	100	112										
890-4666-9	FS09	100	112										
890-4666-10	FS10	102	112										
890-4666-11	SS02A	101	109										
890-4666-12	SS03A	102	112										
890-4666-13	SS08	103	112										
890-4666-14	SS08A	123	131 S1+										
890-4666-15	SS09	122	130										
890-4666-16	SS09A	103	111										
890-4666-17	SS10	100	110										
890-4666-18	SS10A	119	129										
890-4666-19	SS11	85	94										
890-4666-20	SS11A	103	110										
890-4666-21	SS12	131 S1+	100										
890-4666-22	SS12A	128	98										
LCS 880-53599/2-A	Lab Control Sample	91	101										
LCS 880-53630/2-A	Lab Control Sample	100	77										
LCSD 880-53599/3-A	Lab Control Sample Dup	79	84										
LCSD 880-53630/3-A	Lab Control Sample Dup	100	76										
MB 880-53599/1-A	Method Blank	145 S1+	162 S1+										
MB 880-53630/1-A	Method Blank	214 S1+	171 S1+										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53497/5-A
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53497

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/23 15:29	05/18/23 04:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/23 15:29	05/18/23 04:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/16/23 15:29*	*05/18/23 04:11*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*05/16/23 15:29*	*05/18/23 04:11*	*1*

Lab Sample ID: LCS 880-53497/1-A
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53497

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1501	*+	mg/Kg		150	70 - 130		
Toluene			0.100	0.1589	*+	mg/Kg		159	70 - 130		
Ethylbenzene			0.100	0.1429	*+	mg/Kg		143	70 - 130		
m-Xylene & p-Xylene			0.200	0.3204	*+	mg/Kg		160	70 - 130		
o-Xylene			0.100	0.1494	*+	mg/Kg		149	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*196*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-53497/2-A
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53497

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1376	*+	mg/Kg		138	70 - 130	9	35
Toluene			0.100	0.1387	*+	mg/Kg		139	70 - 130	14	35
Ethylbenzene			0.100	0.1324	*+	mg/Kg		132	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2988	*+	mg/Kg		149	70 - 130	7	35
o-Xylene			0.100	0.1354	*+	mg/Kg		135	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*198*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 890-4660-A-1-G MS
Matrix: Solid
Analysis Batch: 53588

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U *+ F1	0.0998	0.1372	F1	mg/Kg		137	70 - 130		
Toluene	<0.00202	U *+ F1	0.0998	0.1371	F1	mg/Kg		137	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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

Lab Sample ID: 890-4660-A-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53588 — **Prep Batch: 53497**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U *+	0.0998	0.1191		mg/Kg		119	70 - 130
m-Xylene & p-Xylene	<0.00404	U *+ F1	0.200	0.2887	F1	mg/Kg		145	70 - 130
o-Xylene	<0.00202	U *+ F1	0.0998	0.1356	F1	mg/Kg		136	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*203*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-4660-A-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53588 — **Prep Batch: 53497**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+ F1	0.0990	0.1284		mg/Kg		130	70 - 130	7	35
Toluene	<0.00202	U *+ F1	0.0990	0.1357	F1	mg/Kg		137	70 - 130	1	35
Ethylbenzene	<0.00202	U *+	0.0990	0.1188		mg/Kg		120	70 - 130	0	35
m-Xylene & p-Xylene	<0.00404	U *+ F1	0.198	0.2600	F1	mg/Kg		131	70 - 130	10	35
o-Xylene	<0.00202	U *+ F1	0.0990	0.1225		mg/Kg		124	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: MB 880-53508/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53588 — **Prep Batch: 53508**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/23 16:07	05/17/23 14:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/23 16:07	05/17/23 14:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/23 16:07	05/17/23 14:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/23 16:07	05/17/23 14:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/23 16:07	05/17/23 14:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/16/23 16:07	05/17/23 14:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/23 16:07*	*05/17/23 14:52*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/16/23 16:07*	*05/17/23 14:52*	*1*

Lab Sample ID: MB 880-53604/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53790 — **Prep Batch: 53604**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/17/23 14:55	05/20/23 08:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/17/23 14:55	05/20/23 08:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/17/23 14:55	05/20/23 08:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/17/23 14:55	05/20/23 08:45	1

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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

Lab Sample ID: MB 880-53604/5-A
Matrix: Solid
Analysis Batch: 53790

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53604

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:55	05/20/23 08:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/17/23 14:55	05/20/23 08:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*05/17/23 14:55*	*05/20/23 08:45*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*05/17/23 14:55*	*05/20/23 08:45*	*1*

Lab Sample ID: MB 880-53605/5-A
Matrix: Solid
Analysis Batch: 53790

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53605

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/17/23 14:58	05/20/23 22:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/17/23 14:58	05/20/23 22:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/17/23 14:58	05/20/23 22:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*05/17/23 14:58*	*05/20/23 22:25*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/17/23 14:58*	*05/20/23 22:25*	*1*

Lab Sample ID: LCS 880-53605/1-A
Matrix: Solid
Analysis Batch: 53790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53605

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1074		mg/Kg		107	70 - 130		
Toluene			0.100	0.09378		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.08857		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1837		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09267		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 880-53605/2-A
Matrix: Solid
Analysis Batch: 53790

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53605

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1203		mg/Kg		120	70 - 130	11	35
Toluene			0.100	0.1031		mg/Kg		103	70 - 130	10	35
Ethylbenzene			0.100	0.09761		mg/Kg		98	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2022		mg/Kg		101	70 - 130	10	35
o-Xylene			0.100	0.09818		mg/Kg		98	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-4666-1 MS — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53790 — **Prep Batch: 53605**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F2 F1	0.100	0.1195		mg/Kg		119	70 - 130
Toluene	<0.00200	U F2 F1	0.100	0.08462		mg/Kg		84	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.100	0.09247		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.200	0.07201	F1	mg/Kg		36	70 - 130
o-Xylene	<0.00200	U F2 F1	0.100	0.09611		mg/Kg		96	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	124		70 - 130
1,4-Difluorobenzene (Surr)	122		70 - 130

Lab Sample ID: 890-4666-1 MSD — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53790 — **Prep Batch: 53605**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1	0.0990	0.2592	F1 F2	mg/Kg		262	70 - 130	74	35
Toluene	<0.00200	U F2 F1	0.0990	0.2156	F1 F2	mg/Kg		218	70 - 130	87	35
Ethylbenzene	<0.00200	U F2 F1	0.0990	0.2214	F1 F2	mg/Kg		224	70 - 130	82	35
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.198	0.2580	F2	mg/Kg		130	70 - 130	113	35
o-Xylene	<0.00200	U F2 F1	0.0990	0.2255	F1 F2	mg/Kg		228	70 - 130	80	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	146	S1+	70 - 130

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

Lab Sample ID: MB 880-53599/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 53552 — **Prep Batch: 53599**

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		05/17/23 12:36	05/17/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/17/23 12:36	05/17/23 19:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/17/23 12:36	05/17/23 19:47	1
Total TPH	<50.0	U	50.0	mg/Kg		05/17/23 12:36	05/17/23 19:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	145	S1+	70 - 130	05/17/23 12:36	05/17/23 19:47	1
o-Terphenyl	162	S1+	70 - 130	05/17/23 12:36	05/17/23 19:47	1

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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

Lab Sample ID: LCS 880-53599/2-A
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53599

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	890.3		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	837.4		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: LCSD 880-53599/3-A
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53599

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	851.2		mg/Kg		85	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	853.2		mg/Kg		85	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 890-4666-1 MS
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 53599

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	922.3		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	974.1		mg/Kg		96	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: 890-4666-1 MSD
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 53599

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	1022		mg/Kg		100	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1039		mg/Kg		102	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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

Lab Sample ID: 890-4666-1 MSD
Matrix: Solid
Analysis Batch: 53552

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 53599

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	114		70 - 130

Lab Sample ID: MB 880-53630/1-A
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53630

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		05/18/23 08:00	05/18/23 08:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/18/23 08:00	05/18/23 08:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/18/23 08:00	05/18/23 08:37	1
Total TPH	<50.0	U	50.0		mg/Kg		05/18/23 08:00	05/18/23 08:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	214	S1+	70 - 130	05/18/23 08:00	05/18/23 08:37	1
o-Terphenyl	171	S1+	70 - 130	05/18/23 08:00	05/18/23 08:37	1

Lab Sample ID: LCS 880-53630/2-A
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53630

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	824.0		mg/Kg		82	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	854.6		mg/Kg		85	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: LCSD 880-53630/3-A
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53630

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	825.3		mg/Kg		83	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	803.9		mg/Kg		80	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	76		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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

Lab Sample ID: 880-28483-A-33-C MS
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53630

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	999	1643	F1	mg/Kg		165	70 - 130
Diesel Range Organics (Over C10-C28)	108		999	939.9		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*124*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 880-28483-A-33-D MSD
Matrix: Solid
Analysis Batch: 53625

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53630

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	999	1673	F1	mg/Kg		167	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	108		999	953.5		mg/Kg		85	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*127*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53365/1-A
Matrix: Solid
Analysis Batch: 53671

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			05/18/23 11:46	1

Lab Sample ID: LCS 880-53365/2-A
Matrix: Solid
Analysis Batch: 53671

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	260.3		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-53365/3-A
Matrix: Solid
Analysis Batch: 53671

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	262.0		mg/Kg		105	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4655-A-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53671

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	73.7		248	339.4		mg/Kg		107	90 - 110

Lab Sample ID: 890-4655-A-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53671

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	73.7		248	340.8		mg/Kg		108	90 - 110	0	20

Lab Sample ID: MB 880-53480/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53675

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/18/23 17:39	1

Lab Sample ID: LCS 880-53480/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	261.9		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-53480/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53675

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	265.1		mg/Kg		106	90 - 110	1	20

Lab Sample ID: 890-4666-1 MS — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53675

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3090	F1	1240	4250		mg/Kg		93	90 - 110

Lab Sample ID: 890-4666-1 MSD — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53675

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3090	F1	1240	3861	F1	mg/Kg		62	90 - 110	10	20

Lab Sample ID: 890-4666-11 MS — **Client Sample ID: SS02A**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 53675

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1050		1260	2422		mg/Kg		109	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-4666-11 MSD
Matrix: Solid
Analysis Batch: 53675

Client Sample ID: SS02A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1050		1260	2418		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

GC VOA

Prep Batch: 53497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-21	SS12	Total/NA	Solid	5035	
890-4666-22	SS12A	Total/NA	Solid	5035	
MB 880-53497/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53497/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53497/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4660-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-4660-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 53508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53508/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 53588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-21	SS12	Total/NA	Solid	8021B	53497
890-4666-22	SS12A	Total/NA	Solid	8021B	53497
MB 880-53497/5-A	Method Blank	Total/NA	Solid	8021B	53497
MB 880-53508/5-A	Method Blank	Total/NA	Solid	8021B	53508
LCS 880-53497/1-A	Lab Control Sample	Total/NA	Solid	8021B	53497
LCSD 880-53497/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53497
890-4660-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	53497
890-4660-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53497

Prep Batch: 53604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53604/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 53605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Total/NA	Solid	5035	
890-4666-2	FS02	Total/NA	Solid	5035	
890-4666-3	FS03	Total/NA	Solid	5035	
890-4666-4	FS04	Total/NA	Solid	5035	
890-4666-5	FS05	Total/NA	Solid	5035	
890-4666-6	FS06	Total/NA	Solid	5035	
890-4666-7	FS07	Total/NA	Solid	5035	
890-4666-8	FS08	Total/NA	Solid	5035	
890-4666-9	FS09	Total/NA	Solid	5035	
890-4666-10	FS10	Total/NA	Solid	5035	
890-4666-11	SS02A	Total/NA	Solid	5035	
890-4666-12	SS03A	Total/NA	Solid	5035	
890-4666-13	SS08	Total/NA	Solid	5035	
890-4666-14	SS08A	Total/NA	Solid	5035	
890-4666-15	SS09	Total/NA	Solid	5035	
890-4666-16	SS09A	Total/NA	Solid	5035	
890-4666-17	SS10	Total/NA	Solid	5035	
890-4666-18	SS10A	Total/NA	Solid	5035	
890-4666-19	SS11	Total/NA	Solid	5035	
890-4666-20	SS11A	Total/NA	Solid	5035	
MB 880-53605/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53605/1-A	Lab Control Sample	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

GC VOA (Continued)

Prep Batch: 53605 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-53605/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4666-1 MS	FS01	Total/NA	Solid	5035	
890-4666-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 53699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Total/NA	Solid	Total BTEX	
890-4666-2	FS02	Total/NA	Solid	Total BTEX	
890-4666-3	FS03	Total/NA	Solid	Total BTEX	
890-4666-4	FS04	Total/NA	Solid	Total BTEX	
890-4666-5	FS05	Total/NA	Solid	Total BTEX	
890-4666-6	FS06	Total/NA	Solid	Total BTEX	
890-4666-7	FS07	Total/NA	Solid	Total BTEX	
890-4666-8	FS08	Total/NA	Solid	Total BTEX	
890-4666-9	FS09	Total/NA	Solid	Total BTEX	
890-4666-10	FS10	Total/NA	Solid	Total BTEX	
890-4666-11	SS02A	Total/NA	Solid	Total BTEX	
890-4666-12	SS03A	Total/NA	Solid	Total BTEX	
890-4666-13	SS08	Total/NA	Solid	Total BTEX	
890-4666-14	SS08A	Total/NA	Solid	Total BTEX	
890-4666-15	SS09	Total/NA	Solid	Total BTEX	
890-4666-16	SS09A	Total/NA	Solid	Total BTEX	
890-4666-17	SS10	Total/NA	Solid	Total BTEX	
890-4666-18	SS10A	Total/NA	Solid	Total BTEX	
890-4666-19	SS11	Total/NA	Solid	Total BTEX	
890-4666-20	SS11A	Total/NA	Solid	Total BTEX	
890-4666-21	SS12	Total/NA	Solid	Total BTEX	
890-4666-22	SS12A	Total/NA	Solid	Total BTEX	

Analysis Batch: 53790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Total/NA	Solid	8021B	53605
890-4666-2	FS02	Total/NA	Solid	8021B	53605
890-4666-3	FS03	Total/NA	Solid	8021B	53605
890-4666-4	FS04	Total/NA	Solid	8021B	53605
890-4666-5	FS05	Total/NA	Solid	8021B	53605
890-4666-6	FS06	Total/NA	Solid	8021B	53605
890-4666-7	FS07	Total/NA	Solid	8021B	53605
890-4666-8	FS08	Total/NA	Solid	8021B	53605
890-4666-9	FS09	Total/NA	Solid	8021B	53605
890-4666-10	FS10	Total/NA	Solid	8021B	53605
890-4666-11	SS02A	Total/NA	Solid	8021B	53605
890-4666-12	SS03A	Total/NA	Solid	8021B	53605
890-4666-13	SS08	Total/NA	Solid	8021B	53605
890-4666-14	SS08A	Total/NA	Solid	8021B	53605
890-4666-15	SS09	Total/NA	Solid	8021B	53605
890-4666-16	SS09A	Total/NA	Solid	8021B	53605
890-4666-17	SS10	Total/NA	Solid	8021B	53605
890-4666-18	SS10A	Total/NA	Solid	8021B	53605
890-4666-19	SS11	Total/NA	Solid	8021B	53605
890-4666-20	SS11A	Total/NA	Solid	8021B	53605

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

GC VOA (Continued)

Analysis Batch: 53790 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53604/5-A	Method Blank	Total/NA	Solid	8021B	53604
MB 880-53605/5-A	Method Blank	Total/NA	Solid	8021B	53605
LCS 880-53605/1-A	Lab Control Sample	Total/NA	Solid	8021B	53605
LCSD 880-53605/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53605
890-4666-1 MS	FS01	Total/NA	Solid	8021B	53605
890-4666-1 MSD	FS01	Total/NA	Solid	8021B	53605

GC Semi VOA

Analysis Batch: 53552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Total/NA	Solid	8015B NM	53599
890-4666-2	FS02	Total/NA	Solid	8015B NM	53599
890-4666-3	FS03	Total/NA	Solid	8015B NM	53599
890-4666-4	FS04	Total/NA	Solid	8015B NM	53599
890-4666-5	FS05	Total/NA	Solid	8015B NM	53599
890-4666-6	FS06	Total/NA	Solid	8015B NM	53599
890-4666-7	FS07	Total/NA	Solid	8015B NM	53599
890-4666-8	FS08	Total/NA	Solid	8015B NM	53599
890-4666-9	FS09	Total/NA	Solid	8015B NM	53599
890-4666-10	FS10	Total/NA	Solid	8015B NM	53599
890-4666-11	SS02A	Total/NA	Solid	8015B NM	53599
890-4666-12	SS03A	Total/NA	Solid	8015B NM	53599
890-4666-13	SS08	Total/NA	Solid	8015B NM	53599
890-4666-14	SS08A	Total/NA	Solid	8015B NM	53599
890-4666-15	SS09	Total/NA	Solid	8015B NM	53599
890-4666-16	SS09A	Total/NA	Solid	8015B NM	53599
890-4666-17	SS10	Total/NA	Solid	8015B NM	53599
890-4666-18	SS10A	Total/NA	Solid	8015B NM	53599
890-4666-19	SS11	Total/NA	Solid	8015B NM	53599
890-4666-20	SS11A	Total/NA	Solid	8015B NM	53599
MB 880-53599/1-A	Method Blank	Total/NA	Solid	8015B NM	53599
LCS 880-53599/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53599
LCSD 880-53599/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53599
890-4666-1 MS	FS01	Total/NA	Solid	8015B NM	53599
890-4666-1 MSD	FS01	Total/NA	Solid	8015B NM	53599

Prep Batch: 53599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Total/NA	Solid	8015NM Prep	
890-4666-2	FS02	Total/NA	Solid	8015NM Prep	
890-4666-3	FS03	Total/NA	Solid	8015NM Prep	
890-4666-4	FS04	Total/NA	Solid	8015NM Prep	
890-4666-5	FS05	Total/NA	Solid	8015NM Prep	
890-4666-6	FS06	Total/NA	Solid	8015NM Prep	
890-4666-7	FS07	Total/NA	Solid	8015NM Prep	
890-4666-8	FS08	Total/NA	Solid	8015NM Prep	
890-4666-9	FS09	Total/NA	Solid	8015NM Prep	
890-4666-10	FS10	Total/NA	Solid	8015NM Prep	
890-4666-11	SS02A	Total/NA	Solid	8015NM Prep	
890-4666-12	SS03A	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

GC Semi VOA (Continued)

Prep Batch: 53599 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-13	SS08	Total/NA	Solid	8015NM Prep	
890-4666-14	SS08A	Total/NA	Solid	8015NM Prep	
890-4666-15	SS09	Total/NA	Solid	8015NM Prep	
890-4666-16	SS09A	Total/NA	Solid	8015NM Prep	
890-4666-17	SS10	Total/NA	Solid	8015NM Prep	
890-4666-18	SS10A	Total/NA	Solid	8015NM Prep	
890-4666-19	SS11	Total/NA	Solid	8015NM Prep	
890-4666-20	SS11A	Total/NA	Solid	8015NM Prep	
MB 880-53599/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53599/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53599/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4666-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-4666-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-21	SS12	Total/NA	Solid	8015B NM	53630
890-4666-22	SS12A	Total/NA	Solid	8015B NM	53630
MB 880-53630/1-A	Method Blank	Total/NA	Solid	8015B NM	53630
LCS 880-53630/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53630
LCSD 880-53630/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53630
880-28483-A-33-C MS	Matrix Spike	Total/NA	Solid	8015B NM	53630
880-28483-A-33-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53630

Prep Batch: 53630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-21	SS12	Total/NA	Solid	8015NM Prep	
890-4666-22	SS12A	Total/NA	Solid	8015NM Prep	
MB 880-53630/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53630/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53630/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28483-A-33-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28483-A-33-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Total/NA	Solid	8015 NM	
890-4666-2	FS02	Total/NA	Solid	8015 NM	
890-4666-3	FS03	Total/NA	Solid	8015 NM	
890-4666-4	FS04	Total/NA	Solid	8015 NM	
890-4666-5	FS05	Total/NA	Solid	8015 NM	
890-4666-6	FS06	Total/NA	Solid	8015 NM	
890-4666-7	FS07	Total/NA	Solid	8015 NM	
890-4666-8	FS08	Total/NA	Solid	8015 NM	
890-4666-9	FS09	Total/NA	Solid	8015 NM	
890-4666-10	FS10	Total/NA	Solid	8015 NM	
890-4666-11	SS02A	Total/NA	Solid	8015 NM	
890-4666-12	SS03A	Total/NA	Solid	8015 NM	
890-4666-13	SS08	Total/NA	Solid	8015 NM	
890-4666-14	SS08A	Total/NA	Solid	8015 NM	
890-4666-15	SS09	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

GC Semi VOA (Continued)

Analysis Batch: 53669 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-16	SS09A	Total/NA	Solid	8015 NM	
890-4666-17	SS10	Total/NA	Solid	8015 NM	
890-4666-18	SS10A	Total/NA	Solid	8015 NM	
890-4666-19	SS11	Total/NA	Solid	8015 NM	
890-4666-20	SS11A	Total/NA	Solid	8015 NM	
890-4666-21	SS12	Total/NA	Solid	8015 NM	
890-4666-22	SS12A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-21	SS12	Soluble	Solid	DI Leach	
890-4666-22	SS12A	Soluble	Solid	DI Leach	
MB 880-53365/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53365/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53365/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4655-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4655-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 53480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Soluble	Solid	DI Leach	
890-4666-2	FS02	Soluble	Solid	DI Leach	
890-4666-3	FS03	Soluble	Solid	DI Leach	
890-4666-4	FS04	Soluble	Solid	DI Leach	
890-4666-5	FS05	Soluble	Solid	DI Leach	
890-4666-6	FS06	Soluble	Solid	DI Leach	
890-4666-7	FS07	Soluble	Solid	DI Leach	
890-4666-8	FS08	Soluble	Solid	DI Leach	
890-4666-9	FS09	Soluble	Solid	DI Leach	
890-4666-10	FS10	Soluble	Solid	DI Leach	
890-4666-11	SS02A	Soluble	Solid	DI Leach	
890-4666-12	SS03A	Soluble	Solid	DI Leach	
890-4666-13	SS08	Soluble	Solid	DI Leach	
890-4666-14	SS08A	Soluble	Solid	DI Leach	
890-4666-15	SS09	Soluble	Solid	DI Leach	
890-4666-16	SS09A	Soluble	Solid	DI Leach	
890-4666-17	SS10	Soluble	Solid	DI Leach	
890-4666-18	SS10A	Soluble	Solid	DI Leach	
890-4666-19	SS11	Soluble	Solid	DI Leach	
890-4666-20	SS11A	Soluble	Solid	DI Leach	
MB 880-53480/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53480/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53480/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4666-1 MS	FS01	Soluble	Solid	DI Leach	
890-4666-1 MSD	FS01	Soluble	Solid	DI Leach	
890-4666-11 MS	SS02A	Soluble	Solid	DI Leach	
890-4666-11 MSD	SS02A	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

HPLC/IC

Analysis Batch: 53671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-21	SS12	Soluble	Solid	300.0	53365
890-4666-22	SS12A	Soluble	Solid	300.0	53365
MB 880-53365/1-A	Method Blank	Soluble	Solid	300.0	53365
LCS 880-53365/2-A	Lab Control Sample	Soluble	Solid	300.0	53365
LCSD 880-53365/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53365
890-4655-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	53365
890-4655-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	53365

Analysis Batch: 53675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4666-1	FS01	Soluble	Solid	300.0	53480
890-4666-2	FS02	Soluble	Solid	300.0	53480
890-4666-3	FS03	Soluble	Solid	300.0	53480
890-4666-4	FS04	Soluble	Solid	300.0	53480
890-4666-5	FS05	Soluble	Solid	300.0	53480
890-4666-6	FS06	Soluble	Solid	300.0	53480
890-4666-7	FS07	Soluble	Solid	300.0	53480
890-4666-8	FS08	Soluble	Solid	300.0	53480
890-4666-9	FS09	Soluble	Solid	300.0	53480
890-4666-10	FS10	Soluble	Solid	300.0	53480
890-4666-11	SS02A	Soluble	Solid	300.0	53480
890-4666-12	SS03A	Soluble	Solid	300.0	53480
890-4666-13	SS08	Soluble	Solid	300.0	53480
890-4666-14	SS08A	Soluble	Solid	300.0	53480
890-4666-15	SS09	Soluble	Solid	300.0	53480
890-4666-16	SS09A	Soluble	Solid	300.0	53480
890-4666-17	SS10	Soluble	Solid	300.0	53480
890-4666-18	SS10A	Soluble	Solid	300.0	53480
890-4666-19	SS11	Soluble	Solid	300.0	53480
890-4666-20	SS11A	Soluble	Solid	300.0	53480
MB 880-53480/1-A	Method Blank	Soluble	Solid	300.0	53480
LCS 880-53480/2-A	Lab Control Sample	Soluble	Solid	300.0	53480
LCSD 880-53480/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53480
890-4666-1 MS	FS01	Soluble	Solid	300.0	53480
890-4666-1 MSD	FS01	Soluble	Solid	300.0	53480
890-4666-11 MS	SS02A	Soluble	Solid	300.0	53480
890-4666-11 MSD	SS02A	Soluble	Solid	300.0	53480

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS01

Date Collected: 05/15/23 10:05
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-1

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			5.01 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/20/23 22:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 20:52	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 17:55	CH	EET MID

Client Sample ID: FS02

Date Collected: 05/15/23 10:10
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-2

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			4.97 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/20/23 23:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 21:57	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 18:39	CH	EET MID

Client Sample ID: FS03

Date Collected: 05/15/23 10:15
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/20/23 23:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 22:19	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			53675	05/18/23 18:44	CH	EET MID

Client Sample ID: FS04

Date Collected: 05/15/23 10:20
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-4

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			5.03 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 00:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS04

Date Collected: 05/15/23 10:20
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-4

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			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 22:40	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 18:49	CH	EET MID

Client Sample ID: FS05

Date Collected: 05/15/23 10:25
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-5

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			5.02 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 00:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 23:02	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 18:55	CH	EET MID

Client Sample ID: FS06

Date Collected: 05/15/23 10:30
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-6

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			5.01 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 01:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 23:23	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 19:11	CH	EET MID

Client Sample ID: FS07

Date Collected: 05/15/23 10:35
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-7

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			4.99 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 01:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/17/23 23:45	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: FS07

Date Collected: 05/15/23 10:35
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-7
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	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 19:16	CH	EET MID

Client Sample ID: FS08

Date Collected: 05/15/23 10:40
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-8
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			4.96 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 01:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 00:06	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 19:22	CH	EET MID

Client Sample ID: FS09

Date Collected: 05/15/23 10:45
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-9
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			5.02 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 02:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 00:27	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 19:27	CH	EET MID

Client Sample ID: FS10

Date Collected: 05/15/23 10:50
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-10
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			5.03 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 02:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 00:48	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			53675	05/18/23 19:32	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS02A
Date Collected: 05/15/23 11:35
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-11
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			5.01 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 04:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 01:31	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 19:38	CH	EET MID

Client Sample ID: SS03A
Date Collected: 05/15/23 11:40
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-12
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			4.97 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 05:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 01:52	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 19:54	CH	EET MID

Client Sample ID: SS08
Date Collected: 05/15/23 11:45
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-13
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			4.99 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 05:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 02:13	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 19:59	CH	EET MID

Client Sample ID: SS08A
Date Collected: 05/15/23 11:50
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-14
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			5.02 g	5 mL	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 05:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS08A
Date Collected: 05/15/23 11:50
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-14
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			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 02:35	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			53675	05/18/23 20:15	CH	EET MID

Client Sample ID: SS09
Date Collected: 05/15/23 11:55
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-15
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	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 06:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 02:56	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 20:20	CH	EET MID

Client Sample ID: SS09A
Date Collected: 05/15/23 12:00
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-16
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	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 06:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 03:18	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/18/23 20:26	CH	EET MID

Client Sample ID: SS10
Date Collected: 05/15/23 12:05
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-17
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	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 07:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 03:39	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS10
Date Collected: 05/15/23 12:05
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-17
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	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			53675	05/18/23 20:31	CH	EET MID

Client Sample ID: SS10A
Date Collected: 05/15/23 12:10
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-18
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	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 07:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 04:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			53675	05/19/23 10:53	CH	EET MID

Client Sample ID: SS11
Date Collected: 05/15/23 12:15
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-19
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	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 08:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 04:22	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		5			53675	05/19/23 10:59	CH	EET MID

Client Sample ID: SS11A
Date Collected: 05/15/23 12:20
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-20
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	53605	05/17/23 14:58	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53790	05/21/23 08:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/22/23 16:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/18/23 12:40	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53599	05/17/23 12:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53552	05/18/23 04:43	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	53480	05/16/23 12:07	KS	EET MID
Soluble	Analysis	300.0		1			53675	05/19/23 11:04	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Client Sample ID: SS12

Date Collected: 05/15/23 12:25
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-21
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	53497	05/16/23 15:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53588	05/18/23 13:39	EL	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/18/23 15:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/19/23 10:11	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53630	05/18/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53625	05/18/23 19:01	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	53365	05/17/23 11:47	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53671	05/18/23 16:51	CH	EET MID

Client Sample ID: SS12A

Date Collected: 05/15/23 12:30
Date Received: 05/15/23 16:17

Lab Sample ID: 890-4666-22
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	53497	05/16/23 15:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53588	05/18/23 14:05	EL	EET MID
Total/NA	Analysis	Total BTEX		1			53699	05/18/23 15:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			53669	05/19/23 10:11	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53630	05/18/23 08:49	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53625	05/18/23 19:23	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53365	05/17/23 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53671	05/18/23 16:56	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 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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
8015B NM	8015NM Prep	Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Cabo Wabo Federal 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

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 24 CTB

Job ID: 890-4666-1
SDG: 03D2024153

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4666-1	FS01	Solid	05/15/23 10:05	05/15/23 16:17	0.5
890-4666-2	FS02	Solid	05/15/23 10:10	05/15/23 16:17	0.5
890-4666-3	FS03	Solid	05/15/23 10:15	05/15/23 16:17	0.5
890-4666-4	FS04	Solid	05/15/23 10:20	05/15/23 16:17	0.5
890-4666-5	FS05	Solid	05/15/23 10:25	05/15/23 16:17	0.5
890-4666-6	FS06	Solid	05/15/23 10:30	05/15/23 16:17	0.5
890-4666-7	FS07	Solid	05/15/23 10:35	05/15/23 16:17	0.5
890-4666-8	FS08	Solid	05/15/23 10:40	05/15/23 16:17	0.5
890-4666-9	FS09	Solid	05/15/23 10:45	05/15/23 16:17	0.5
890-4666-10	FS10	Solid	05/15/23 10:50	05/15/23 16:17	0.5
890-4666-11	SS02A	Solid	05/15/23 11:35	05/15/23 16:17	1
890-4666-12	SS03A	Solid	05/15/23 11:40	05/15/23 16:17	1
890-4666-13	SS08	Solid	05/15/23 11:45	05/15/23 16:17	0.2
890-4666-14	SS08A	Solid	05/15/23 11:50	05/15/23 16:17	1
890-4666-15	SS09	Solid	05/15/23 11:55	05/15/23 16:17	0.2
890-4666-16	SS09A	Solid	05/15/23 12:00	05/15/23 16:17	1
890-4666-17	SS10	Solid	05/15/23 12:05	05/15/23 16:17	0.2
890-4666-18	SS10A	Solid	05/15/23 12:10	05/15/23 16:17	1
890-4666-19	SS11	Solid	05/15/23 12:15	05/15/23 16:17	0.2
890-4666-20	SS11A	Solid	05/15/23 12:20	05/15/23 16:17	1
890-4666-21	SS12	Solid	05/15/23 12:25	05/15/23 16:17	0.2
890-4666-22	SS12A	Solid	05/15/23 12:30	05/15/23 16:17	1

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 3

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:	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 24 B CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024153	Due Date:	
Project Location:	32.1222,-103.9408	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:	TNM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2	
Total Containers:		Corrected Temperature:	1.0	

Preservative Codes

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

890-4666 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS01	Soil	5/15/2023	1005	0.5'	Comp	1		x	x	x	
FS02	Soil	5/15/2023	1010	0.5'	Comp	1		x	x	x	
FS03	Soil	5/15/2023	1015	0.5'	Comp	1		x	x	x	
FS04	Soil	5/15/2023	1020	0.5'	Comp	1		x	x	x	
FS05	Soil	5/15/2023	1025	0.5'	Comp	1		x	x	x	
FS06	Soil	5/15/2023	1030	0.5'	Comp	1		x	x	x	
FS07	Soil	5/15/2023	1035	0.5'	Comp	1		x	x	x	
FS08	Soil	5/15/2023	1040	0.5'	Comp	1		x	x	x	
FS09	Soil	5/15/2023	1045	0.5'	Comp	1		x	x	x	
FS10	Soil	5/15/2023	1050	0.5'	Comp	1		x	x	x	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten	Cole Crup	5.15.23 1617	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 3

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 24 B CTB	Turn Around	
Project Number:	03D2024153	☑ Routine ☐ Rush	
Project Location:	32.1222,-103.9408	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_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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SS02A	Soil	5/15/2023	1135	1.0'	Comp	1		x	x	x	
SS03A	Soil	5/15/2023	1140	1.0'	Comp	1		x	x	x	
SS08	Soil	5/15/2023	1145	0.2'	Comp	1		x	x	x	
SS08A	Soil	5/15/2023	1150	1.0'	Comp	1		x	x	x	
SS09	Soil	5/15/2023	1155	0.2'	Comp	1		x	x	x	
SS09A	Soil	5/15/2023	1200	1.0'	Comp	1		x	x	x	
SS10	Soil	5/15/2023	1205	0.2'	Comp	1		x	x	x	
SS10A	Soil	5/15/2023	1210	1.0'	Comp	1		x	x	x	
SS11	Soil	5/15/2023	1215	0.2'	Comp	1		x	x	x	
SS11A	Soil	5/15/2023	1220	1.0'	Comp	1		x	x	x	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010:** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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	Clae Cop	5.15.23	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 3 of 3

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 24 B CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024153	Due Date:	
Project Location:	32.1222,-103.9408	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:		
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_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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	Parameters: TPH (8015)	Parameters: BTEX (8021)	Sample Comments
SS12	Soil	5/15/2023	1225	0.2'	Comp	1		x	x	x	
SS12A	Soil	5/15/2023	1230	1.0'	Comp	1		x	x	x	

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

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		5-15-23	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4666-1
SDG Number: 03D2024153

Login Number: 4666
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4666-1
SDG Number: 03D2024153

Login Number: 4666
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/17/23 10:46 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	

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Hamlet, Robert, EMNRD
To: Hadlie Green
Cc: Carlile, Justin; Kalei Jennings; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: (Extension Approval) - COG - Cabo Wabo Federal 24 B CTB (Incident Number NAPP2301933240)
Date: Wednesday, March 29, 2023 3:29:41 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2301933240**

Hadlie,

Your request for an extension to **July 4th, 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: Wednesday, March 29, 2023 1:16 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: FW: [EXTERNAL] COG - Extension Request - Cabo Wabo Federal 24 B CTB (Incident Number NAPP2301933240)

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 29, 2023 9:02 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Carlile, Justin <Justin.Carlile@conocophillips.com>; Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COG - Extension Request - Cabo Wabo Federal 24 B CTB (Incident Number NAPP2301933240)

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 24 B CTB (Incident Number NAPP2301933240)

COG Operating, LLC (COG) is requesting an extension for the current deadline of April 5, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Cabo Wabo Federal 24 B CTB (Incident Number NAPP2301933240). The release was discovered on January 5, 2023. Initial site assessment activities have been completed and excavation activities are ongoing. 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 4, 2023.

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 3:54:01 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: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 5/15/2023)
Date: Friday, May 12, 2023 5:02:54 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Please be aware that notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to insure inclusion in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, May 12, 2023 7:38 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 5/15/2023)

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 May 15, 2023.

- Cabo Wabo Federal Com 704-706 / NAPP2304550164
  - Sampling Date: 5/15/2023 @ 10:00 AM MST

-

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	NAPP2301933240
District RP	
Facility ID	
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)*	NAPP2301933240
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.1222 Longitude -103.9408
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Cabo Wabo Federal 24 B CTB	Site Type	Tank Battery
Date Release Discovered	January 5, 2023	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
C	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) 7.816	Volume Recovered (bbls) 7
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a hole at the bottom of a flowback tank due to corrosion.
The release was 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	NAPP2301933240
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: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 1/19/2023

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Jocelyn Harimon Date: 01/19/2023

L48 Spill Volume Estimate Form

NAPP2301933240

Facility Name & Number:	Alamo Maroon Core / Cabo Wabo Fed Com 704H, 705H, 706H
Asset Area:	Deleware Basin West
Release Discovery Date & Time:	1/5/2023
Release Type:	Produced Water
Provide any known details about the event:	Produced Water/Frac Fluids

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	12.0	36.0	0.25	3	432.000	0.007	0.534	0.000	0.534
Rectangle B	48.0	60.0	0.25	2	2880.000	0.010	5.340	0.001	5.343
Rectangle C	36.0	33.0	0.25	3	1188.000	0.007	1.469	0.000	1.469
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
								Total Volume Release:	7.346

NAPP2301933240

L48 Spill Volume Estimate Form

Facility Name & Number:	Alamo Maroon Core / Cabo Wabo Fed Com 704-706H
Asset Area:	Deleware Basin West
Release Discovery Date & Time:	1/5/23 01:30am
Release Type:	Produced Water
Provide any known details about the event:	Produced Water/Frac Fluids

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	56.0	2.0	0.25	3	112.000	0.007	0.138	0.000	0.138
Rectangle B	56.0	2.0	0.25	3	112.000	0.007	0.138	0.000	0.138
Rectangle C	52.0	3.0	0.25	3	156.000	0.007	0.193	0.000	0.193
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
								Total Volume Release:	0.470

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

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 177432
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	1/19/2023

Incident ID	NAPP22301933240
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?	>101 (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	NAPP2301933240
District RP	
Facility ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: ___Justin Carlile_____ Title: __Senior Environmental Engineer_____

Signature:_____Justin Carlile_____ Date: __06/29/2023_____

email: __Justin.Carlile@conocophillips.com_____ Telephone: ___(432)202-4112_____

OCD Only

Received by: Shelly Wells Date: 6/30/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2301933240
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: 06/29/2023

email: Justin.Carlile@conocophillips.com Telephone: (432)202-4112

OCD Only

Received by: Shelly Wells Date: 6/30/2023

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: _____

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QUESTIONS

Action 348404

QUESTIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 348404
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2301933240**
Incident Name	**NAPP2301933240 CABO WABO FEDERAL 24 B CTB @ 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 24 B CTB
Date Release Discovered	01/05/2023
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: Corrosion | Tank (Any) | Produced Water | Released: 8 BBL | Recovered: 7 BBL | Lost: 1 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.*

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 348404
	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: 05/28/2024

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 348404
	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	Attached Document
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 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 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	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 500 and 1000 (ft.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	None
A 100-year floodplain	Greater than 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	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	7030
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3740
GRO+DRO (EPA SW-846 Method 8015M)	3740
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
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	02/16/2023
On what date will (or did) the final sampling or liner inspection occur	02/27/2024
On what date will (or was) the remediation complete(d)	02/27/2024
What is the estimated surface area (in square feet) that will be reclaimed	15430
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	1950
What is the estimated volume (in cubic yards) that will be remediated	40
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.	

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 348404
	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.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	R360 Artesia LLC LANDFARM [fEEM0112340644]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
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: 05/28/2024
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.	

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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: 348404
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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
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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 348404
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**316803**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/27/2024**
What was the (estimated) number of samples that were to be gathered	**4**
What was the sampling surface area in square feet	**15305**

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	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1950
What was the total volume (cubic yards) remediated	40
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	N/A

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: 05/28/2024

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QUESTIONS (continued)

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	Action Number: 348404
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 348404

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	Action Number: 348404
	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 #NAPP2301933240 CABO WABO FEDERAL 24 B CTB, thank you. This Remediation Closure Report is approved.	5/29/2024