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: _____

Spill Calculation - Subsurface Spill - Rectangle									Remediation Recommendation	
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	On/Off Pad (dropdown)	Soil Spilled-Fluid Saturation (%.)	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	[redacted]	Total Estimated Contaminated Soil, uncompacted, 25% (yd^3.)	Current Rule of Thumb - RMR Handover Volume, (yd^3.)
Rectangle A	42.0	10.0	6.0	On-Pad	8.00%	37.38	2.99		9.72	750
Rectangle B	20.0	18.0	4.0	On-Pad	8.00%	21.36	1.71		5.56	
Rectangle C	12.0	16.0	3.0	On-Pad	8.00%	8.54	0.68		2.22	
Rectangle D	12.0	8.0	3.0	On-Pad	8.00%	4.27	0.34		1.11	
Rectangle E	10.0	16.0	4.0	On-Pad	8.00%	9.49	0.76		2.47	
Rectangle F	13.0	8.0	3.0	On-Pad	8.00%	4.63	0.37		1.20	
Rectangle G	3.0	2.0	3.0	On-Pad	8.00%	0.27	0.02		0.07	
Rectangle H	8.0	5.0	3.0	On-Pad	8.00%	1.78	0.14		0.46	
Rectangle I						0.00			0.00	
Rectangle J						0.00			0.00	
					Total Subsurface Volume Released:		7.0179		22.82	BU

ENSOLUM

June 24, 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
Buck Federal CTB
Incident Number NAPP2315731307
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of ConocoPhillips Company (COP), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Buck Federal CTB (Site), in accordance with an approved *Remediation Work Plan (Work Plan),* submitted August 29, 2023. The *Work Plan* detailed delineation activities that were completed at the Site and proposed a liner inspection and excavation of impacted soil identified at the Site. Based on assessment and excavation activities completed and laboratory analytical results from the soil sampling events in accordance with the *Work Plan*, COP is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2315731307.

Details regarding the release, Site characterization, and proposed remediation activities can be referenced in the original *Work Plan* submitted on August 29, 2023. The original *Work Plan* is included as Appendix A. On December 28, 2023, the New Mexico Oil Conservation Division (NMOCD) approved the *Work Plan* as written.

BACKGROUND

The Site is located in Unit O, Section 17, Township 26 South, Range 32 East, in Lea County, New Mexico (32.0375°, -103.6966°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 1, 2023, a storage tank was overfilled, resulting in the release of approximately 7.0179 barrels (bbls) of crude oil within the lined storage tank containment berm and onto the surface of the well pad, north of the containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 5 bbls of crude oil were recovered. COP reported the release to the NMOCD immediately via email and subsequently submitted a *Release Notification Form C-141* (Form C-141) on June 6, 2023. The release was assigned Incident Number NAPP2315731307.

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 reported in the August 2023 *Work Plan*, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)

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

LINER INSPECTION ACTIVITIES

A 48-hour advance notice of the liner inspection was submitted on January 11, 2024, to the NMOCD. A liner integrity inspection was conducted by Ensolum personnel on January 16, 2024. Upon inspection, no rips, tears, holes, or damage was observed. The liner was determined to be sufficient, and all released fluids have been removed. Photographic documentation was conducted at the Site. A photographic log is included in Appendix B.

EXCAVATION ACTIVITIES AND ANALYTICAL RESULTS

Between June 6 and June 13, 2024, Ensolum personnel oversaw excavation activities based on field screening activities and laboratory analytical results from delineation activities. Excavation activities were performed via mini excavator, hydrovac, hand shovels, and transport vehicles. To direct excavation activities, soil was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The excavation was completed to depths ranging from 1-foot to 4 feet bgs. Photographic documentation is included in Appendix B.

Following soil removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS08 were collected from the floor of the excavation at depths ranging from 1-foot to 4 feet bgs. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. The excavation extent and excavation soil sample locations are presented on Figure 3.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): 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 all excavation samples (FS01 through FS08 and SW01 through SW05) 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 C.

The excavation measured approximately 1,362 square feet in areal extent. A total of approximately 200 cubic yards of impacted soil was removed during the excavation activities. The soil was transported and properly disposed of at the Lea Land Disposal Facility in Jal, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

CLOSURE REQUEST

Remediation activities were conducted at the Site to address the June 2023 crude oil release. A liner integrity inspection was conducted by Ensolum personnel on January 16, 2024. Upon inspection, no rips, tears, holes, or damage was observed, and the liner was determined to be sufficient. Laboratory analytical results for excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Based on the soil analytical results, no further remediation is required. COP will backfill the excavation with material purchased locally and recontour the Site to match pre-existing conditions.

Based on initial response efforts, the liner operating as designed, and soil sample laboratory analytical results confirming the removal of impacted soil, these actions appear to have been protective of human health, the environment, and groundwater. As such, COP respectfully requests closure for Incident Number NAPP2315731307.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

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

cc: Jacob Laird, ConocoPhillips Company
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 3	Assessment and Delineation Soil Sample Locations
Figure 2	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	August 29, 2023, *Remediation Work Plan*
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation

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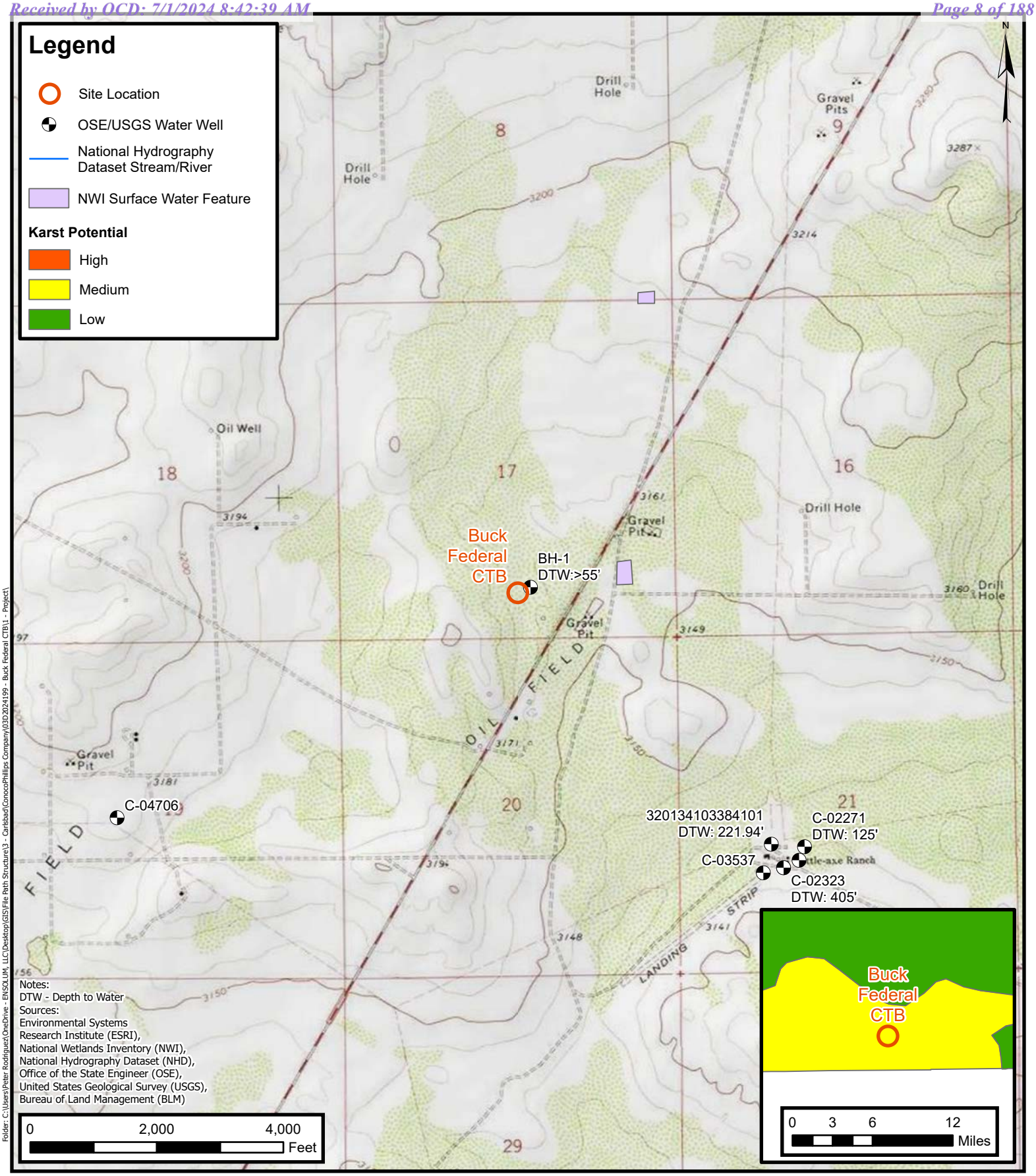
FIGURES



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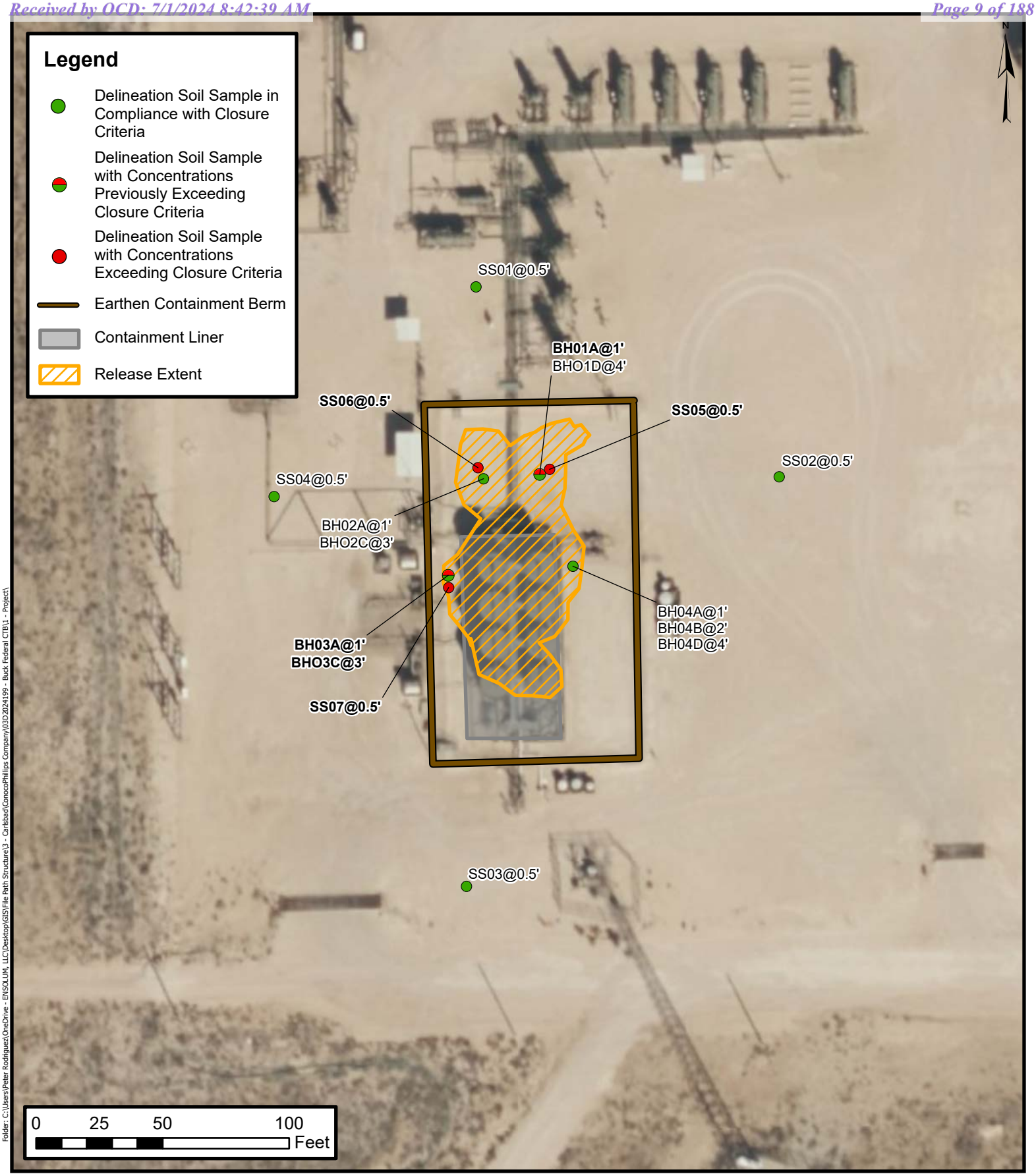
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

ConocoPhillips Company
Buck Federal CTB
Incident Number: NAPP2315731307
Unit O, Sec 17, T26S, R32E
Lea County, New Mexico

FIGURE 1



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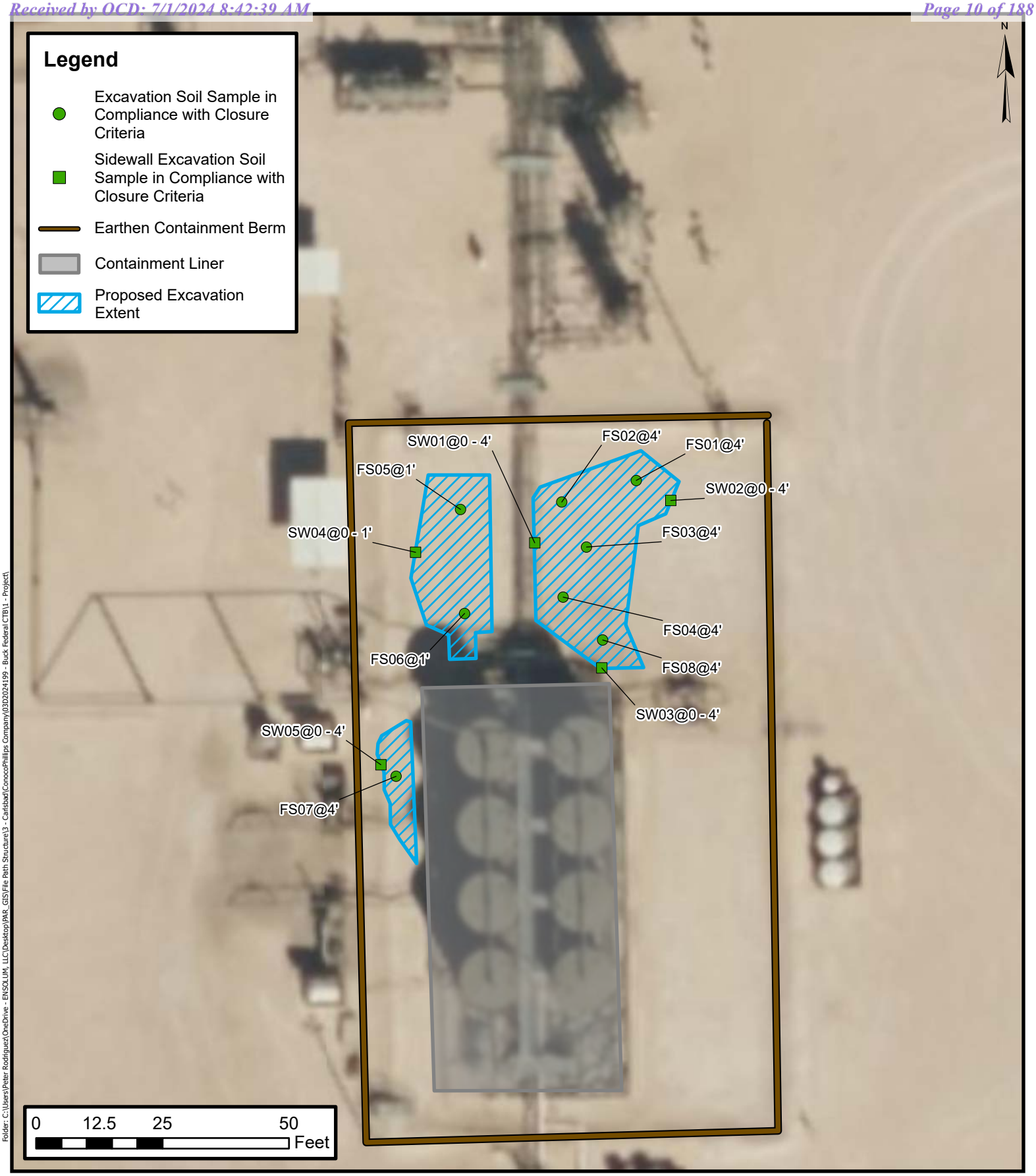
Environmental, Engineering and Hydrogeologic Consultants

Assessment and Delineation Soil Sample Locations

ConocoPhillips Company
Buck Federal CTB
Incident Number: NAPP2315731307
Unit O, Sec 17, T26S, R32E
Lea County, New Mexico

FIGURE 2



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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

ConocoPhillips Company
Buck Federal CTB
Incident Number: NAPP2315731307
Unit O, Sec 17, T26S, R32E
Lea County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Buck Federal CTB
ConocoPhillips Company
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Assessment Soil Samples										
SS01	06/07/2023	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	52.4
SS02	06/07/2023	0.5	<0.00202	0.0153	<49.9	<49.9	<49.9	<49.9	<49.9	63.3
SS03	06/07/2023	0.5	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	73.8
SS04	06/07/2023	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	52.6
SS05	06/07/2023	0.5	<0.00201	0.0440	3,900	3,490	<49.9	**7,390**	**7,390**	59.0
SS06	06/07/2023	0.5	<0.0400	13.0	1,450	1,930	<50.0	**3,380**	**3,380**	63.9
SS07	06/07/2023	0.5	0.00258	0.158	6,170	5,220	<49.8	**11,400**	**11,400**	2,620
Delineation Soil Samples										
BH01A	07/17/2023	1	<0.202	49.4	1,210	1,790	<49.8	**3,000**	**3,000**	59.3
BH01D	07/17/2023	4	<0.00200	0.0429	<49.6	80.2	<49.6	80.2	80.2	115
BH02A	07/17/2023	1	<0.00198	0.0106	<50.5	59.2	<50.5	59.2	59.2	150
BH02C	07/17/2023	3	<0.00202	0.00961	<49.7	<49.7	<49.7	<49.7	<49.7	634
BH03A	07/17/2023	1	<0.499	12.7	1,600	3,210	<49.6	**4,810**	**4,810**	4,030
BH03C	07/17/2023	3	0.662	38.0	14,200	9,840	<50.1	**24,040**	**24,100**	5,670
BH04A	07/17/2023	1	<0.00200	0.0541	150	209	<50.0	359	359	3,600
BH04B	07/17/2023	2	<0.00200	0.00918	<50.5	<50.5	<50.5	<50.5	<50.5	4,750
BH04D	07/17/2023	4	<0.00198	<0.00396	<49.6	<49.6	<49.6	<49.6	<49.6	4,190

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Buck Federal CTB
ConocoPhillips Company
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Excavation Soil Samples										
FS01	06/06/2024	4	0.00742	1.12	63.0	408	<49.9	471	471	71.5
FS02	06/06/2024	4	0.00708	1.39	114	423	<49.9	537	537	117
FS03	06/06/2024	4	0.0175	1.04	343	651	<50.0	994	994	137
FS04	06/06/2024	4	<0.00200	0.0166	<49.9	118	<49.9	118	118	150
FS05	06/06/2024	1	<0.00201	<0.00402	<50.0	103	<50.0	103	103	239
FS06	06/06/2024	1	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	228
FS07	06/13/2024	4	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	85.6
FS08	06/13/2024	4	<0.00199	<0.00398	890	<49.9	<49.9	890	890	7.82
SW01	06/06/2024	0 - 4	<0.00202	<0.00403	<49.8	93.7	<49.8	93.7	93.7	98.9
SW02	06/13/2024	0 - 4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	11.3
SW03	06/13/2024	0 - 4	<0.00198	<0.00397	<49.9	53.3	<49.9	53.3	53.3	46.7
SW04	06/06/2024	0 - 1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	313
SW05	06/13/2024	0 - 4	<0.00201	<0.00402	<49.9	57.1	<49.9	57.1	57.1	199

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 indicates sample has been excavated.

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APPENDIX A

August 29, 2023, *Remediation Work Plan*

ENSOLUM

August 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: Remediation Work Plan
Buck Federal CTB
Incident Number NAPP2315731307
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of ConocoPhillips Company (COP), has prepared this *Remediation Work Plan (Work Plan)* to document assessment and soil sampling activities completed to date and propose additional remedial actions to address impacted soil identified at the Buck Federal CTB (Site), following a crude oil release. The following *Work Plan* proposes lateral and vertical delineation of the release and excavation of impacted soil.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit O, Section 17, Township 26 South, Range 32 East, in Lea County, New Mexico (32.0375°, -103.6966°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 1, 2023, a storage tank was overfilled, resulting in the release of approximately 7.0179 barrels (bbls) of crude oil within the lined storage tank containment berm and onto the surface of the well pad north of the containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 5 bbls of crude oil were recovered. COP reported the release to the New Mexico Oil Conservation Division (NMOCD) immediately via email and subsequently submitted a *Release Notification Form C-141* (Form C-141) on June 6, 2023. The release was assigned Incident Number NAPP2315731307.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized for applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on 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 51 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. The soil boring is located approximately 0.4 miles northeast of the Site and is depicted on Figure 1. The soil boring was drilled during September 2022 to a depth of 55 feet bgs and no groundwater was encountered. The soil

boring was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a riverine, located approximately 8,110 feet east 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 not within a 100-year floodplain or overlying a subsurface mine. The Site is greater than 1,000 feet to a freshwater well or spring. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On June 7, 2023, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four assessment soil samples (SS01 through SS04) were collected around the release extent at a depth of 0.5 feet bgs to assess the lateral extent of the release. Three assessment soil samples (SS05 through SS07) were collected within the release extent at a depth of 0.5 feet bgs, to assess surficial soil within the release extent. The assessment 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 visible release extent and assessment soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. A photographic log is included in Appendix B.

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

Laboratory analytical results for assessment soil samples SS01 through SS04 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for assessment soil samples SS05 through SS07 indicated TPH-GRO/TPH-DRO and TPH concentrations exceeded the Site Closure Criteria. The laboratory analytical results are summarized on the attached Table 1. Based on the laboratory analytical results, additional delineation activities were warranted.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On July 17, 2023, delineation activities were conducted at the Site to assess the vertical extent of impacted soil in the release areas outside of the lined containment. Boreholes BH01 through BH04 were advanced via hand auger in the release areas to the north, east, and west of the lined containment. The boreholes were advanced to depths ranging from 3 feet to 4 feet bgs. 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. Discrete delineation soil samples were collected from each borehole at depths ranging from 1-foot to 4 feet bgs. The delineation soil samples were collected, handled, and analyzed following the same procedures as described above. The delineation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 2.

Laboratory analytical results for the delineation soil samples collected from boreholes BH02 and BH04 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for the delineation soil samples collected from boreholes BH01 and BH03 indicated TPH-GRO/TPH-DRO and TPH concentrations exceeded the Site Closure Criteria at depths ranging from 1-foot to 3 feet. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D. Based on the laboratory analytical results for assessment samples SS05 through SS07 and delineation samples collected from boreholes BH01 and BH03, additional delineation and excavation activities are warranted.

PROPOSED REMEDIAL ACTIONS

Analytical results for the assessment and delineation soil samples indicate TPH impacted soil is present in the vicinity of surface assessment samples SS05 through SS07 and boreholes BH01 and BH03. As such, COP requests approval to complete the following remediation activities:

Release Area Within Lined Containment:

- The lined tank battery containment will be inspected to determine if there are any deficiencies, specifically, tears or holes in the liner that could have allowed released fluids to migrate to the subsurface. Photographic documentation will be completed to confirm the integrity of the liner.
    - If the liner is intact with no tears or holes, no further action will be required within the lined containment area.
    - If the integrity of the liner is compromised, additional delineation activities will be completed to assess for the presence or absence of impacts to soil beneath the liner.
    - If impacts are identified beneath the lined containment, COP will delineate the lateral and vertical extent of impacted soil beneath the lined containment and request deferral of final remediation due to the presence of active production equipment in the lined containment, where remediation would require a major facility deconstruction.

Release Area Outside of Lined Containment:

- TPH impacted soil will be excavated in the accessible areas of the release extent in the vicinity of surface assessment samples SS05 and SS06 and borehole BH01. Excavation will proceed laterally and vertically until sidewall and floor samples are compliant with the Site Closure Criteria. The proposed excavation extent is shown on Figure 3.

  - Following removal of the impacted soil, 5-point composite confirmation samples will be collected at least every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

- Impacted soil will be excavated to the extent possible in the area around surface assessment sample SS07 and borehole BH03, located immediately adjacent to the lined containment. Due to the proximity of the lined containment, any impacted soil that cannot be safely excavated will be deferred to reduce the likelihood of compromising the integrity of the containment and active storage tanks. The proposed excavation extent is shown on Figure 3.
  - Any impacted soil left in place immediately adjacent to the storage tank containment will be laterally and vertically delineated to below the Site Closure Criteria.
  - To address hydrocarbon impacts left in place, a 5 percent solution of Micro-Blaze® and freshwater will applied to the impacted area to promote degradation of the hydrocarbons.
- The excavation and delineation samples will be submitted for laboratory analysis of BTEX, TPH, and chloride as described above.

COP will complete the delineation and excavation activities within 90 days of the date of approval of this *Work Plan* by the NMOCD. A *Deferral Request* detailing the liner inspection results, delineation and excavation activities, and volume of impacted soil left in-place will be submitted within 30 days of receipt of the final laboratory analytical results. COP does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 55 feet bgs and impacted left in-place immediately adjacent to or beneath the liner will be laterally and vertically delineated to below the Site Closure Criteria. As such, COP respectfully requests approval of this *Work Plan* for Incident Number NAPP2315731307. NMOCD notifications are included in Appendix E and the Form C-141 is included in Appendix F.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Daniel R. Moir, PG
Senior Managing Geologist

cc: Jacob Laird, ConocoPhillips Company
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Assessment and Delineation Soil Sample Locations
Figure 3	Proposed Excavation Extent
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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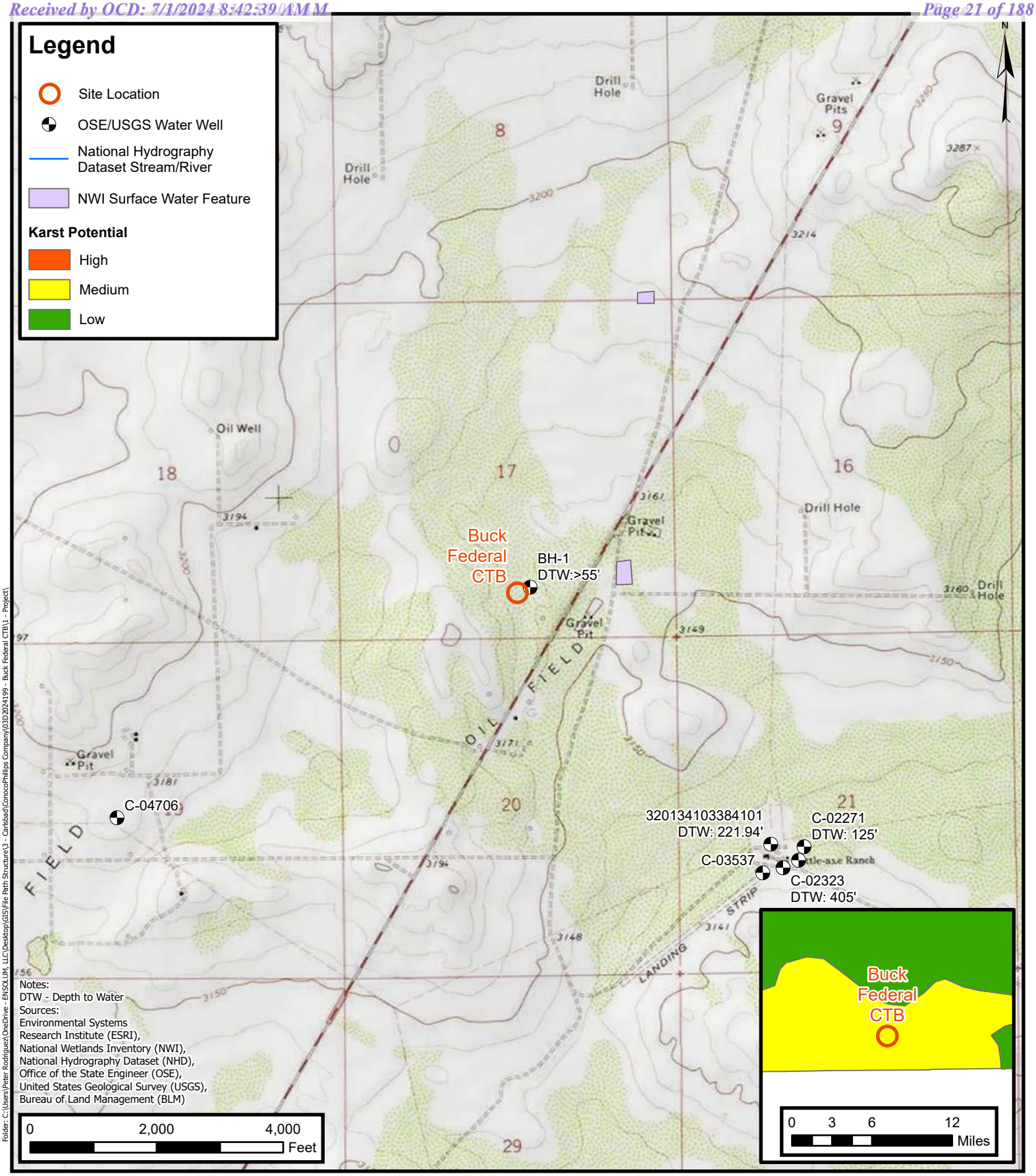
FIGURES



Folder: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\3 - Carlsbad\ConocoPhillips Company\03D2024199 - Buck Federal CTB\1 - Project\

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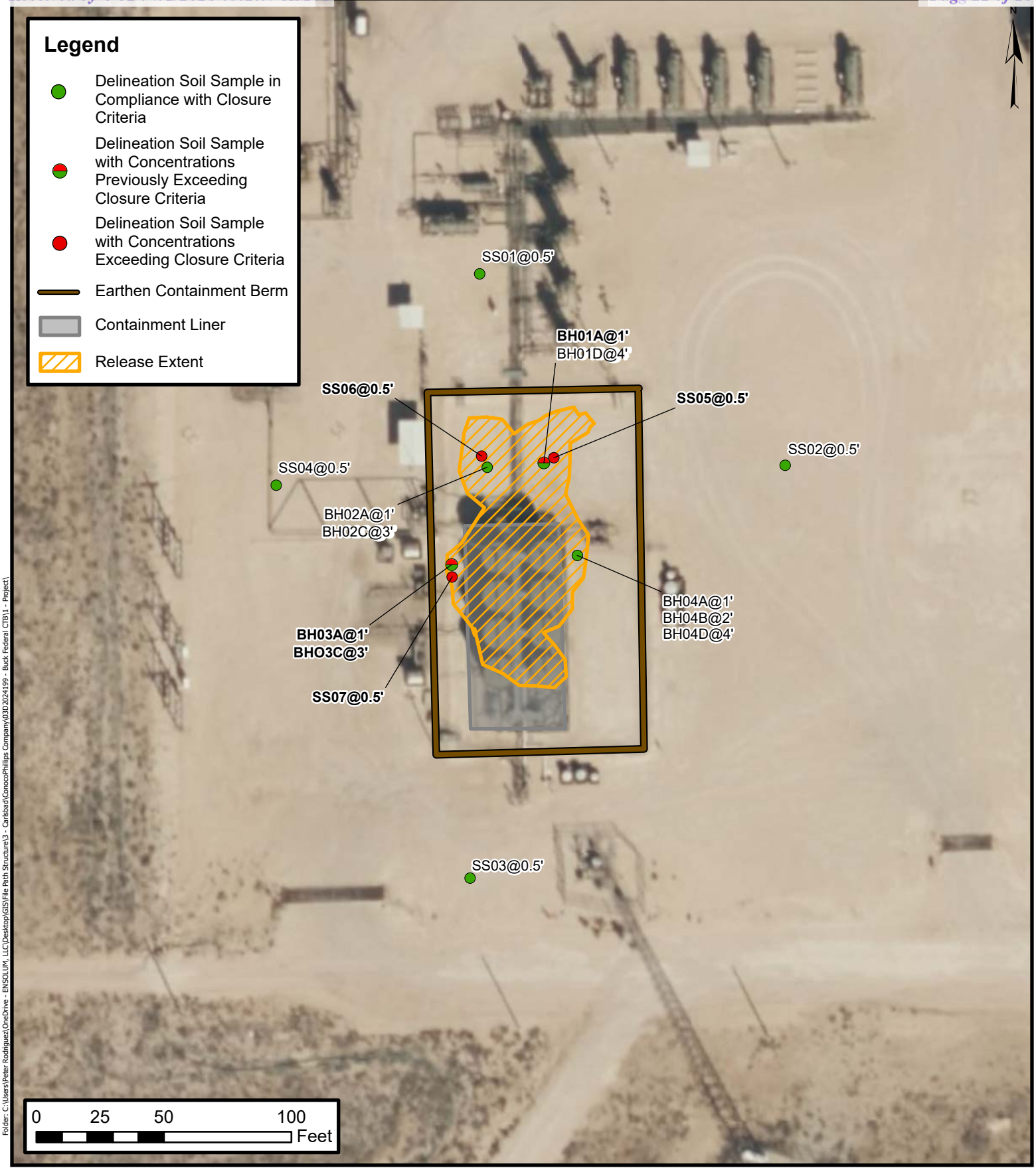
Site Receptor Map

ConocoPhillips Company
Buck Federal CTB
Incident Number: NAPP2315731307
Unit O, Sec 17, T26S, R32E
Lea County, New Mexico

FIGURE 1



Folder: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\3 - Carlsbad\ConocoPhillips Company\03D2024199 - Buck Federal CTB\1 - Project\

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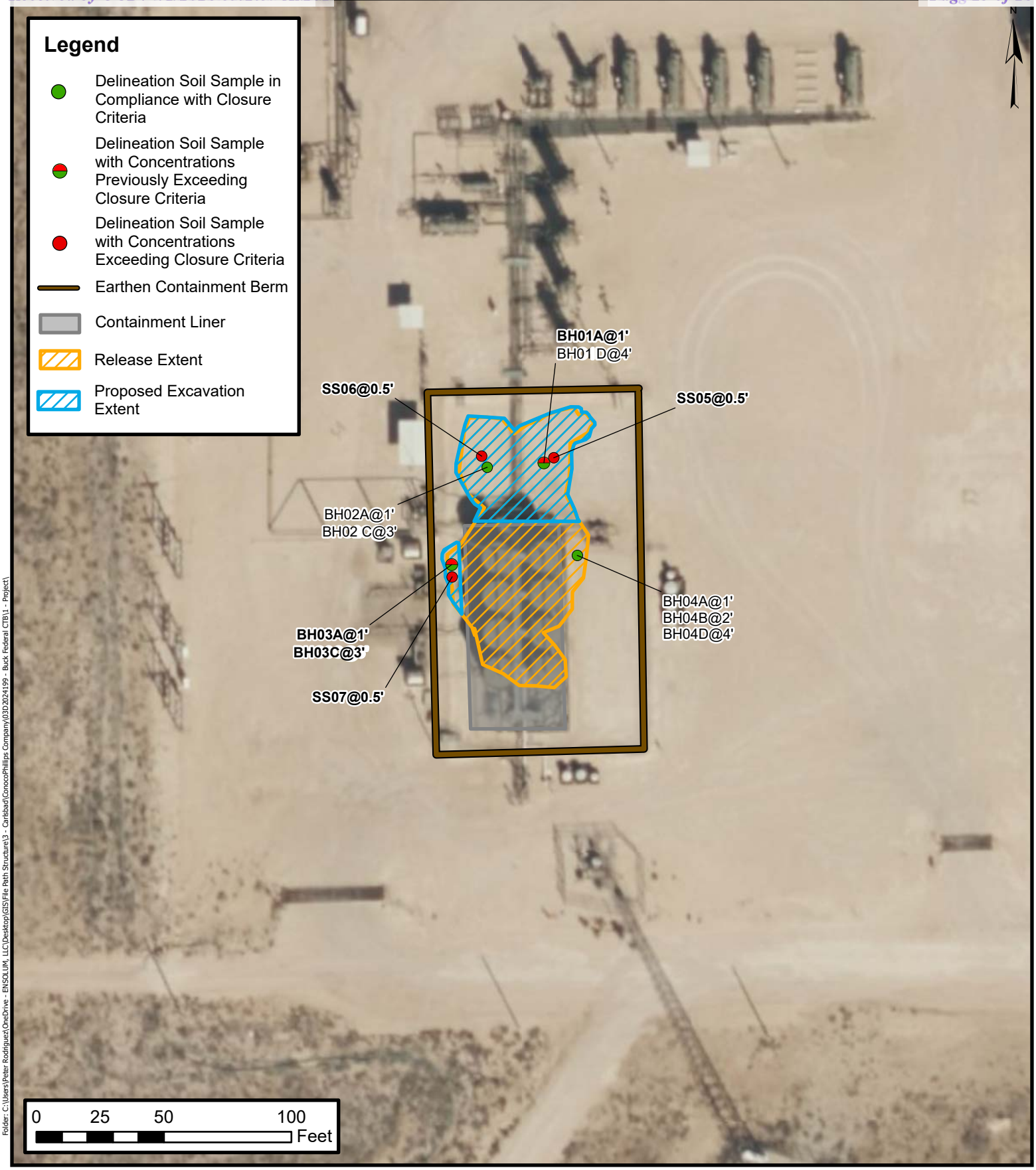
Assessment and Delineation Soil Sample Locations

ConocoPhillips Company
Buck Federal CTB
Incident Number: NAPP2315731307
Unit O, Sec 17, T26S, R32E
Lea County, New Mexico

FIGURE 2



Folder: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\3 - Carlsbad\ConocoPhillips Company\03D2024199 - Buck Federal CTB\1 - Project\

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Environmental, Engineering and Hydrogeologic Consultants

Proposed Excavation Extent

ConocoPhillips Company
Buck Federal CTB
Incident Number: NAPP2315731307
Unit O, Sec 17, T26S, R32E
Lea County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Buck Federal CTB
ConocoPhillips Company
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Assessment Soil Samples										
SS01	06/07/2023	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	52.4
SS02	06/07/2023	0.5	<0.00202	0.0153	<49.9	<49.9	<49.9	<49.9	<49.9	63.3
SS03	06/07/2023	0.5	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	73.8
SS04	06/07/2023	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	52.6
SS05	06/07/2023	0.5	<0.00201	0.0440	3,900	3,490	<49.9	**7,390**	**7,390**	59.0
SS06	06/07/2023	0.5	<0.0400	13.0	1,450	1,930	<50.0	**3,380**	**3,380**	63.9
SS07	06/07/2023	0.5	0.00258	0.158	6,170	5,220	<49.8	**11,400**	**11,400**	2,620
Delineation Soil Samples										
BH01A	07/17/2023	1	<0.202	49.4	1,210	1,790	<49.8	**3,000**	**3,000**	59.3
BH01D	07/17/2023	4	<0.00200	0.0429	<49.6	80.2	<49.6	80.2	80.2	115
BH02A	07/17/2023	1	<0.00198	0.0106	<50.5	59.2	<50.5	59.2	59.2	150
BH02C	07/17/2023	3	<0.00202	0.00961	<49.7	<49.7	<49.7	<49.7	<49.7	634
BH03A	07/17/2023	1	<0.499	12.7	1,600	3,210	<49.6	**4,810**	**4,810**	4,030
BH03C	07/17/2023	3	0.662	38.0	14,200	9,840	<50.1	**24,040**	**24,100**	5,670
BH04A	07/17/2023	1	<0.00200	0.0541	150	209	<50.0	359	359	3,600
BH04B	07/17/2023	2	<0.00200	0.00918	<50.5	<50.5	<50.5	<50.5	<50.5	4,750
BH04D	07/17/2023	4	<0.00198	<0.00396	<49.6	<49.6	<49.6	<49.6	<49.6	4,190

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.*

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APPENDIX A

Referenced Well Records

212C-MD-02589	TETRA TECH	**LOG OF BORING DTW**	Page 1 of 1

Project Name: Buck Federal CTB Release

Borehole Location: GPS Coordinates: 32.037733°, -103.695950° | Surface Elevation: 3171 ft

Borehole Number: DTW | Borehole Diameter (in.): 8 | Date Started: 9/27/2022 | Date Finished: 9/27/2022

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
0												**-SM-** SILTY SAND: Light brown, coarse-grained, loose, with occasional caliche, dry.	1.5	
												-SM- SILTY SAND: Tan, coarse to fine-grained, dense, with abundant caliche, dry.	3	
												-SP- SAND: Tan, fine-grained, dense, with moderate caliche, dry.	4	
5												**-SP-** SAND: Tan, fine to very fine-grained, dense, with trace caliche, dry.		
10														
15													14	
												-SP- SANDSTONE: Reddish brown, cemented, dry.		
20														
25														
30														
35														
40														
45														
50														
55													55	

Bottom of borehole at 55.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, Discrete Sample, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes:
Surface elevation is an estimated value based on Google Earth data.

Logger: Colton Bickerstaff | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: New Mexico | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320134103384101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 320134103384101 26S.32E.21.32311

Lea County, New Mexico
Latitude 32°01'35.2", Longitude 103°41'01.8" NAD83
Land-surface elevation 3,130 feet above NAVD88

The depth of the well is 405 feet below land surface.
The depth of the hole is 405 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Dockum Group (231DCKM) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum
1993-06-16		D	62610		2723.41
1993-06-16		D	62611		2725.00
1993-06-16		D	72019	405.00	
2013-01-16	19:10 UTC	m	62610		2906.47
2013-01-16	19:10 UTC	m	62611		2908.06
2013-01-16	19:10 UTC	m	72019	221.94	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute

Section	Code	Description
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	L	Interpreted from geophysical logs.
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions or Comments
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

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

Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer

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
	C 03595 POD1	4	2	3	21	26S	32E	624423	3544045

Driller License:	1654	**Driller Company:**	NOT WORKING FOR HIRE--SIRMAN DRILLING AND CONSTRUC		
Driller Name:	SIRMAN, JOHN (LD)				
Drill Start Date:	09/30/2013	**Drill Finish Date:**	09/30/2013	**Plug Date:**	
Log File Date:	10/29/2013	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	6.00	**Depth Well:**	280 feet	**Depth Water:**	180 feet

Water Bearing Stratifications:	Top	Bottom	Description
	160	200	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	200	240

BORING RECORD

Start: 12:39
Finish: 14:32

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	0	Caliche, 5YR 8/1, White, Fill	Caliche							SOIL : PPM
	5	Silty Sand, 5YR 5/6, Yellowish Red, Very Fine Grained Quartz, Poorly Sorted,Grain Imbedded with Caliche below 5', White, 5YR 8/1, Quartz Sand, Medium to Coarse Grade	SM							SOIL : PPM
	10									
	15									
	20	Sand, 7.5YR 5/6, Strong Brown, Very Fine Grained Quartz Sand, Rounded, Poorly Sorted Reddish Brown, 5YR 5/4, Yellowish Red, 5YR 5/6, below 20', Dry	SW			2			20	12:47
	25	Thin Caliche Beds Below 25', Indurated, 5YR 7/0, Pink, Moderately Hard								
	30	Sandstone Harder Below 30', Hard at 35'-40', Fine to Very Fine Grained Quartz Sand, Very Well Cemented	Sand Stone							
	35									
	40	Shale (Red Bed), 2.5YR 4/6, Red, Very Fine Grained, Poorly Sorted, Weakly Cemented, Dry				3			40	13:19
	45									
	50	Below 50' Interbedded with Thin Sandstone Beds, Moderately Hard, Dry				4			60	13:39
	55		Shale							
	60									
	65									

PID READING scale: 2 4 6 8 10 12 14 16 18

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
LABORATORY TEST LOCATION
PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

JOB NUMBER : Chevron/ 20-0107-23
HOLE DIAMETER : 5"
LOCATION : Malestorm 15-1 SWD 32°2'28.43"N, 103°39'35.87"W
LAI GEOLOGIST : M. Larson
DRILLING CONTRACTOR : Scarborough Drilling
DRILLING METHOD : Air Rotary

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 10/12/2022

BORING NUMBER : BH-1

BORING RECORD

Start: 12:39
Finish: 14:32

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING (PPM X)	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	70	Sandstone, 2.5YR 5/9, Reddish Brown, Very Fine Grained Quartz Sand,Poorly Sorted, Soft to Moderate, Well Cemented	Sand Stone							SOIL : PPM SOIL : PPM
	75									
	80	Shale (Red Bed), 2.5YR 4/6 to 5/6, Red to Reddish Brown, Silty, Very Fine Grained Quartz Sand, Dry	Shale			5			80	13:56
	85									
	90									
	95									
	100									
	105		Shale							
	110									
	115	TD: 115'								
	120									
	125									
	130									

PID READING scale: 2 4 6 8 10 12 14 16 18

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
LABORATORY TEST LOCATION
PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 10/12/2022
BORING NUMBER : BH-1

JOB NUMBER : Chevron/ 20-0107-23
HOLE DIAMETER : 5"
LOCATION : Malestorm 15-1 SWD 32°2'28.43"N, 103°39'35.87"W
LAI GEOLOGIST : M. Larson
DRILLING CONTRACTOR : Scarborough Drilling
DRILLING METHOD : Air Rotary

Page Last Modified: 2023-08-09 15:36:47 EDT

0.28 0.24 nadww02

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APPENDIX B

Photographic Log

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Photographic Log
ConocoPhillips Company
Buck Federal CTB
Incident Number NAPP2315731307

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

Photograph: 2 Date: 6/1/2023
Description: Exposed liner in release footprint
View: West

Photograph: 3 Date: 6/7/2023
Description: Initial assessment activities
View: South

Photograph: 4 Date: 7/17/2023
Description: Delineation activities, BH03
View: East

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 7/17/2023
	Site Name: Buck Federal CTB	
	Incident Number: NAPP2315731307	
	Job Number: 03D2024199	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.037605,-103.696696	Hole Diameter:	Total Depth: 4'

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. No correction factors included. ND: Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Damp	ND	2764	N	BH01A	1	1	CHHE	Caliche: gray, tan, some gravel, hydrocarbon odor
Damp	ND	2619	N			2	CHHE	SAA (same as above)
Damp	ND	946	N			3	SP-SM	Sand: orange - brown, fine grain, poorly graded, few subround gravel, some caliche, hydrocarbon odor
Damp	ND	510	N	BH01D	4	4	SP-SM	SAA

TD (refusal) at 4 feet bgs

ENSOLUM

Sample Name: BH02	Date: 7/17/2023
Site Name: Buck Federal CTB	
Incident Number: NAPP2315731307	
Job Number: 03D2024199	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten / Method: Hand Auger
Coordinates: 32.037601,-103.696768	Hole Diameter: / Total Depth: 3'

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. No correction factors included. ND: Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Damp	ND	0	N	BH02A	1	1	CHHE	Caliche: tan, dark tan, some gravel, no odor
Damp	ND	0	N			2	SP-SM	Sand: orange - brown, medium to fine grain, poorly graded, few subround gravel, some caliche, no odor
Damp	ND	0	N	BH02C	3	3	SP-SM	SAA (same as above)
								TD at 3 feet bgs
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

Sample Name: BH03	Date: 7/17/2023
Site Name: Buck Federal CTB	
Incident Number: NAPP2315731307	
Job Number: 03D2024199	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten / Method: Hand Auger
Coordinates: 32.037497,-103.696814	Hole Diameter: / Total Depth: 3'

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. No correction factors included. ND: Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Damp	ND	2805	N	BH03A	1	1	CHHE	Caliche: gray, tan, some gravel, hydrocarbon odor
Damp	ND	2593	N			2	CHHE	Caliche: tan, yellowish tan, hydrocarbon odor
Damp	ND	2485	N	BH03C	3	3	CHHE	SAA (same as above)
								TD (refusal) at 3 feet bgs
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

Sample Name: BH04	Date: 7/17/2023
Site Name: Buck Federal CTB	
Incident Number: NAPP2315731307	
Job Number: 03D2024199	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten / Method: Hand Auger
Coordinates: 32.037505,-103.696655	Hole Diameter: / Total Depth: 4'

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. No correction factors included. ND: Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Damp	ND	39.8	N	BH04A	1	1	CHHE	Caliche: gray, tan, some gravel, hydrocarbon odor
Damp	ND	1.9	N	BH04B	2	2	SP-SM	Sand: orange - redish brown, medium to fine grain, poorly graded, few subround gravel, some caliche, slight hydorcarbon odor
Damp	ND	3.1	N			3	CHHE	Caliche: tan, yellowish tan, slight hydorcarbon odor
Damp	ND	1.2	N	BH04D	4	4	CHHE	SAA (same as above) TD (refusal) at 4 feet bgs
						7		
						8		
						9		
						10		
						11		
						12		

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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 6/20/2023 3:10:09 PM

JOB DESCRIPTION

Buck Federal CTB
SDG NUMBER 03D2024199

JOB NUMBER

890-4795-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

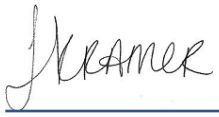
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
6/20/2023 3:10:09 PM

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

Client: Ensolum
Project/Site: Buck Federal CTB

Laboratory Job ID: 890-4795-1
SDG: 03D2024199

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Job ID: 890-4795-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4795-1

Receipt
The samples were received on 6/8/2023 8:29 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4795-1), SS02 (890-4795-2), SS03 (890-4795-3), SS04 (890-4795-4), SS05 (890-4795-5), SS06 (890-4795-6) and SS07 (890-4795-7).

GC VOA
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-55146 and analytical batch 880-55553 recovered outside control limits for the following analytes: Benzene and Toluene. These analytes were acceptable in the LCS, therefore, the data was qualified and reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-55146 and analytical batch 880-55553 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS) precision was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-55739 and analytical batch 880-55778 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-55739/5-A). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-55159/1-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-4795-1), SS02 (890-4795-2), SS04 (890-4795-4), SS05 (890-4795-5), SS06 (890-4795-6), SS07 (890-4795-7), (890-4794-A-5-C), (890-4794-A-5-D MS) and (890-4794-A-5-E MSD). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS01

Date Collected: 06/07/23 13:25
Date Received: 06/08/23 08:29
Sample Depth: 0.5

Lab Sample ID: 890-4795-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:58	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:58	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/09/23 13:04	06/15/23 16:58	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:58	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/09/23 13:04	06/15/23 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*06/09/23 13:04*	*06/15/23 16:58*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/09/23 13:04*	*06/15/23 16:58*	*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			06/16/23 12:59	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			06/12/23 14:35	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		06/09/23 14:05	06/11/23 00:27	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/09/23 14:05	06/11/23 00:27	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/09/23 14:05	06/11/23 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/11/23 00:27*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/09/23 14:05*	*06/11/23 00:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**52.4**		4.98		mg/Kg			06/09/23 15:41	1

Client Sample ID: SS02

Date Collected: 06/07/23 13:30
Date Received: 06/08/23 08:29
Sample Depth: 0.5

Lab Sample ID: 890-4795-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202		mg/Kg		06/09/23 13:04	06/15/23 18:49	1
Toluene	<0.00202	U *+	0.00202		mg/Kg		06/09/23 13:04	06/15/23 18:49	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/09/23 13:04	06/15/23 18:49	1
m-Xylene & p-Xylene	**0.0107**		0.00403		mg/Kg		06/09/23 13:04	06/15/23 18:49	1
o-Xylene	**0.00462**		0.00202		mg/Kg		06/09/23 13:04	06/15/23 18:49	1
Xylenes, Total	**0.0153**		0.00403		mg/Kg		06/09/23 13:04	06/15/23 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*06/09/23 13:04*	*06/15/23 18:49*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS02

Lab Sample ID: 890-4795-2
Matrix: Solid
Date Collected: 06/07/23 13:30
Date Received: 06/08/23 08:29
Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/09/23 13:04*	*06/15/23 18:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0153**		0.00403	mg/Kg			06/16/23 12:59	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			06/12/23 14:35	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		06/09/23 14:05	06/11/23 00:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/23 14:05	06/11/23 00:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/23 14:05	06/11/23 00:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/11/23 00:48*	*1*
o-Terphenyl	*99*		*70 - 130*	*06/09/23 14:05*	*06/11/23 00:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.3**		5.03	mg/Kg			06/09/23 15:47	1

Client Sample ID: SS03

Lab Sample ID: 890-4795-3
Matrix: Solid
Date Collected: 06/07/23 13:35
Date Received: 06/08/23 08:29
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202	mg/Kg		06/09/23 13:04	06/15/23 19:10	1
Toluene	<0.00202	U *+	0.00202	mg/Kg		06/09/23 13:04	06/15/23 19:10	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		06/09/23 13:04	06/15/23 19:10	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		06/09/23 13:04	06/15/23 19:10	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		06/09/23 13:04	06/15/23 19:10	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		06/09/23 13:04	06/15/23 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*06/09/23 13:04*	*06/15/23 19:10*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/09/23 13:04*	*06/15/23 19:10*	*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			06/16/23 12:59	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			06/12/23 14:35	1

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS03

Lab Sample ID: 890-4795-3
Matrix: Solid
Date Collected: 06/07/23 13:35
Date Received: 06/08/23 08:29
Sample Depth: 0.5

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		06/09/23 14:05	06/11/23 01:09	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/09/23 14:05	06/11/23 01:09	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/09/23 14:05	06/11/23 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*06/09/23 14:05*	*06/11/23 01:09*	*1*
o-Terphenyl	*97*		*70 - 130*	*06/09/23 14:05*	*06/11/23 01:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**73.8**		5.01		mg/Kg			06/09/23 16:03	1

Client Sample ID: SS04

Lab Sample ID: 890-4795-4
Matrix: Solid
Date Collected: 06/07/23 13:40
Date Received: 06/08/23 08:29
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201		mg/Kg		06/09/23 13:04	06/15/23 19:30	1
Toluene	<0.00201	U *+	0.00201		mg/Kg		06/09/23 13:04	06/15/23 19:30	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/09/23 13:04	06/15/23 19:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/09/23 13:04	06/15/23 19:30	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/09/23 13:04	06/15/23 19:30	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/09/23 13:04	06/15/23 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*06/09/23 13:04*	*06/15/23 19:30*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*06/09/23 13:04*	*06/15/23 19:30*	*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			06/16/23 12:59	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			06/12/23 14:35	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		06/09/23 14:05	06/11/23 01:31	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/09/23 14:05	06/11/23 01:31	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/09/23 14:05	06/11/23 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/11/23 01:31*	*1*
o-Terphenyl	*105*		*70 - 130*	*06/09/23 14:05*	*06/11/23 01:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS04

Lab Sample ID: 890-4795-4
Matrix: Solid
Date Collected: 06/07/23 13:40
Date Received: 06/08/23 08:29
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.6		4.97		mg/Kg			06/09/23 16:08	1

Client Sample ID: SS05

Lab Sample ID: 890-4795-5
Matrix: Solid
Date Collected: 06/07/23 13:10
Date Received: 06/08/23 08:29
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		06/16/23 17:19	06/19/23 21:12	1
Toluene	0.00925		0.00201		mg/Kg		06/16/23 17:19	06/19/23 21:12	1
Ethylbenzene	0.0105		0.00201		mg/Kg		06/16/23 17:19	06/19/23 21:12	1
m-Xylene & p-Xylene	0.0199		0.00402		mg/Kg		06/16/23 17:19	06/19/23 21:12	1
o-Xylene	0.00432		0.00201		mg/Kg		06/16/23 17:19	06/19/23 21:12	1
Xylenes, Total	0.0242		0.00402		mg/Kg		06/16/23 17:19	06/19/23 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*06/16/23 17:19*	*06/19/23 21:12*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*06/16/23 17:19*	*06/19/23 21:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0440		0.00402		mg/Kg			06/20/23 12:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	7390		49.9		mg/Kg			06/12/23 14:35	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	3900		49.9		mg/Kg		06/09/23 14:05	06/11/23 01:52	1
Diesel Range Organics (Over C10-C28)	3490		49.9		mg/Kg		06/09/23 14:05	06/11/23 01:52	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/23 14:05	06/11/23 01:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*174*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/11/23 01:52*	*1*
o-Terphenyl	*84*		*70 - 130*	*06/09/23 14:05*	*06/11/23 01:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.0		4.96		mg/Kg			06/09/23 16:24	1

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS06

Lab Sample ID: 890-4795-6
Matrix: Solid
Date Collected: 06/07/23 13:15
Date Received: 06/08/23 08:29
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0400	U *+	0.0400		mg/Kg		06/09/23 13:04	06/15/23 21:34	20
Toluene	**1.42**	***+**	0.0400		mg/Kg		06/09/23 13:04	06/15/23 21:34	20
Ethylbenzene	**0.993**		0.0400		mg/Kg		06/09/23 13:04	06/15/23 21:34	20
m-Xylene & p-Xylene	**6.63**		0.0800		mg/Kg		06/09/23 13:04	06/15/23 21:34	20
o-Xylene	**3.99**		0.0400		mg/Kg		06/09/23 13:04	06/15/23 21:34	20
Xylenes, Total	**10.6**		0.0800		mg/Kg		06/09/23 13:04	06/15/23 21:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/09/23 13:04*	*06/15/23 21:34*	*20*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*06/09/23 13:04*	*06/15/23 21:34*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**13.0**		0.0800		mg/Kg			06/16/23 12:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3380**		50.0		mg/Kg			06/12/23 14:35	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	**1450**		50.0		mg/Kg		06/09/23 14:05	06/11/23 02:35	1
Diesel Range Organics (Over C10-C28)	**1930**		50.0		mg/Kg		06/09/23 14:05	06/11/23 02:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/11/23 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*153*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/11/23 02:35*	*1*
o-Terphenyl	*90*		*70 - 130*	*06/09/23 14:05*	*06/11/23 02:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.9**		5.03		mg/Kg			06/09/23 16:30	1

Client Sample ID: SS07

Lab Sample ID: 890-4795-7
Matrix: Solid
Date Collected: 06/07/23 13:20
Date Received: 06/08/23 08:29
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00258**		0.00200		mg/Kg		06/16/23 17:19	06/19/23 21:33	1
Toluene	**0.0269**		0.00200		mg/Kg		06/16/23 17:19	06/19/23 21:33	1
Ethylbenzene	**0.0184**		0.00200		mg/Kg		06/16/23 17:19	06/19/23 21:33	1
m-Xylene & p-Xylene	**0.0899**		0.00399		mg/Kg		06/16/23 17:19	06/19/23 21:33	1
o-Xylene	**0.0201**		0.00200		mg/Kg		06/16/23 17:19	06/19/23 21:33	1
Xylenes, Total	**0.110**		0.00399		mg/Kg		06/16/23 17:19	06/19/23 21:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*06/16/23 17:19*	*06/19/23 21:33*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS07
Date Collected: 06/07/23 13:20
Date Received: 06/08/23 08:29
Sample Depth: 0.5

Lab Sample ID: 890-4795-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*124*		*70 - 130*	*06/16/23 17:19*	*06/19/23 21:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.158**		0.00399		mg/Kg			06/20/23 12:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**11400**		49.8		mg/Kg			06/12/23 14:35	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	**6170**		49.8		mg/Kg		06/09/23 14:05	06/11/23 02:56	1
Diesel Range Organics (Over C10-C28)	**5220**		49.8		mg/Kg		06/09/23 14:05	06/11/23 02:56	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/09/23 14:05	06/11/23 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*249*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/11/23 02:56*	*1*
o-Terphenyl	*74*		*70 - 130*	*06/09/23 14:05*	*06/11/23 02:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2620**		25.1		mg/Kg			06/09/23 16:35	5

Surrogate Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

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)
880-29648-A-21-G MS	Matrix Spike	98	105
880-29648-A-21-H MSD	Matrix Spike Duplicate	102	110
890-4794-A-1-D MS	Matrix Spike	113	92
890-4794-A-1-E MSD	Matrix Spike Duplicate	112	101
890-4795-1	SS01	94	96
890-4795-2	SS02	82	102
890-4795-3	SS03	84	96
890-4795-4	SS04	95	103
890-4795-5	SS05	109	105
890-4795-6	SS06	103	70
890-4795-7	SS07	108	124
LCS 880-55146/1-A	Lab Control Sample	98	104
LCS 880-55739/1-A	Lab Control Sample	92	107
LCSD 880-55146/2-A	Lab Control Sample Dup	114	99
LCSD 880-55739/2-A	Lab Control Sample Dup	86	110
MB 880-55146/5-A	Method Blank	94	111
MB 880-55739/5-A	Method Blank	65 S1-	101

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4794-A-5-D MS	Matrix Spike	139 S1+	100
890-4794-A-5-E MSD	Matrix Spike Duplicate	132 S1+	92
890-4795-1	SS01	142 S1+	111
890-4795-2	SS02	131 S1+	99
890-4795-3	SS03	129	97
890-4795-4	SS04	136 S1+	105
890-4795-5	SS05	174 S1+	84
890-4795-6	SS06	153 S1+	90
890-4795-7	SS07	249 S1+	74
LCS 880-55159/2-A	Lab Control Sample	126	98
LCSD 880-55159/3-A	Lab Control Sample Dup	119	91
MB 880-55159/1-A	Method Blank	0.02 S1-	0.009 S1-

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55146/5-A
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55146

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/09/23 13:04	06/15/23 13:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*06/09/23 13:04*	*06/15/23 13:24*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*06/09/23 13:04*	*06/15/23 13:24*	*1*

Lab Sample ID: LCS 880-55146/1-A
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55146

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1292		mg/Kg		129	70 - 130		
Toluene			0.100	0.1280		mg/Kg		128	70 - 130		
Ethylbenzene			0.100	0.1102		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.1975		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.08973		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-55146/2-A
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55146

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1364	*+	mg/Kg		136	70 - 130	5	35
Toluene			0.100	0.1345	*+	mg/Kg		134	70 - 130	5	35
Ethylbenzene			0.100	0.1238		mg/Kg		124	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.2274		mg/Kg		114	70 - 130	14	35
o-Xylene			0.100	0.1049		mg/Kg		105	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4794-A-1-D MS
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U *+ F1	0.0994	0.1241		mg/Kg		125	70 - 130		
Toluene	<0.00202	U *+ F1	0.0994	0.1210		mg/Kg		122	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

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

Lab Sample ID: 890-4794-A-1-D MS
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0994	0.1127		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	<0.00404	U	0.199	0.2099		mg/Kg		106	70 - 130
o-Xylene	<0.00202	U	0.0994	0.09963		mg/Kg		100	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-4794-A-1-E MSD
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55146

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+ F1	0.0996	0.1514	F1	mg/Kg		152	70 - 130	20	35
Toluene	<0.00202	U *+ F1	0.0996	0.1439	F1	mg/Kg		145	70 - 130	17	35
Ethylbenzene	<0.00202	U	0.0996	0.1176		mg/Kg		118	70 - 130	4	35
m-Xylene & p-Xylene	<0.00404	U	0.199	0.2115		mg/Kg		106	70 - 130	1	35
o-Xylene	<0.00202	U	0.0996	0.1117		mg/Kg		112	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 880-55739/5-A
Matrix: Solid
Analysis Batch: 55778

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55739

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/16/23 17:19	06/19/23 13:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/16/23 17:19	06/19/23 13:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/16/23 17:19	06/19/23 13:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/16/23 17:19	06/19/23 13:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/16/23 17:19	06/19/23 13:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/16/23 17:19	06/19/23 13:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*06/16/23 17:19*	*06/19/23 13:33*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/16/23 17:19*	*06/19/23 13:33*	*1*

Lab Sample ID: LCS 880-55739/1-A
Matrix: Solid
Analysis Batch: 55778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55739

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			0.100	0.1200		mg/Kg		120	70 - 130
Toluene			0.100	0.1042		mg/Kg		104	70 - 130
Ethylbenzene			0.100	0.1046		mg/Kg		105	70 - 130
m-Xylene & p-Xylene			0.200	0.2139		mg/Kg		107	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

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

Lab Sample ID: LCS 880-55739/1-A
Matrix: Solid
Analysis Batch: 55778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55739

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1030		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-55739/2-A
Matrix: Solid
Analysis Batch: 55778

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55739

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1109		mg/Kg		111	70 - 130	8	35
Toluene			0.100	0.09082		mg/Kg		91	70 - 130	14	35
Ethylbenzene			0.100	0.08914		mg/Kg		89	70 - 130	16	35
m-Xylene & p-Xylene			0.200	0.1761		mg/Kg		88	70 - 130	19	35
o-Xylene			0.100	0.08438		mg/Kg		84	70 - 130	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 880-29648-A-21-G MS
Matrix: Solid
Analysis Batch: 55778

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55739

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0994	0.07259		mg/Kg		73	70 - 130		
Toluene	<0.00202	U F1	0.0994	0.05404	F1	mg/Kg		53	70 - 130		
Ethylbenzene	<0.00202	U F1	0.0994	0.04604	F1	mg/Kg		46	70 - 130		
m-Xylene & p-Xylene	<0.00404	U F1	0.199	0.08962	F1	mg/Kg		45	70 - 130		
o-Xylene	<0.00202	U F1	0.0994	0.04582	F1	mg/Kg		46	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-29648-A-21-H MSD
Matrix: Solid
Analysis Batch: 55778

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55739

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.07523		mg/Kg		76	70 - 130	4	35
Toluene	<0.00202	U F1	0.0996	0.05349	F1	mg/Kg		53	70 - 130	1	35
Ethylbenzene	<0.00202	U F1	0.0996	0.04804	F1	mg/Kg		48	70 - 130	4	35
m-Xylene & p-Xylene	<0.00404	U F1	0.199	0.09580	F1	mg/Kg		48	70 - 130	7	35
o-Xylene	<0.00202	U F1	0.0996	0.04898	F1	mg/Kg		49	70 - 130	7	35

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

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

Lab Sample ID: 880-29648-A-21-H MSD
Matrix: Solid
Analysis Batch: 55778

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55739

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

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

Lab Sample ID: MB 880-55159/1-A
Matrix: Solid
Analysis Batch: 55207

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55159

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 20:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 20:02	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 20:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	0.02	S1-	70 - 130	06/09/23 14:05	06/10/23 20:02	1
o-Terphenyl	0.009	S1-	70 - 130	06/09/23 14:05	06/10/23 20:02	1

Lab Sample ID: LCS 880-55159/2-A
Matrix: Solid
Analysis Batch: 55207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55159

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	928.0		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	877.0		mg/Kg		88	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	126		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-55159/3-A
Matrix: Solid
Analysis Batch: 55207

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55159

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	915.1		mg/Kg		92	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	906.0		mg/Kg		91	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	91		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

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

Lab Sample ID: 890-4794-A-5-D MS
Matrix: Solid
Analysis Batch: 55207

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55159

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1241		mg/Kg		121	70 - 130
Diesel Range Organics (Over C10-C28)	55.5		998	957.0		mg/Kg		90	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*139*	*S1+*	*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: 890-4794-A-5-E MSD
Matrix: Solid
Analysis Batch: 55207

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55159

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	1148		mg/Kg		112	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	55.5		999	900.3		mg/Kg		85	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*132*	*S1+*	*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55047/1-A
Matrix: Solid
Analysis Batch: 55167

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/09/23 14:16	1

Lab Sample ID: LCS 880-55047/2-A
Matrix: Solid
Analysis Batch: 55167

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	255.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-55047/3-A
Matrix: Solid
Analysis Batch: 55167

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	260.5		mg/Kg		104	90 - 110	2	20

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4795-2 MS
Matrix: Solid
Analysis Batch: 55167

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	63.3		252	323.6		mg/Kg		104	90 - 110		

Lab Sample ID: 890-4795-2 MSD
Matrix: Solid
Analysis Batch: 55167

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	63.3		252	332.7		mg/Kg		107	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

GC VOA

Prep Batch: 55146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Total/NA	Solid	5035	
890-4795-2	SS02	Total/NA	Solid	5035	
890-4795-3	SS03	Total/NA	Solid	5035	
890-4795-4	SS04	Total/NA	Solid	5035	
890-4795-6	SS06	Total/NA	Solid	5035	
MB 880-55146/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55146/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55146/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4794-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-4794-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Total/NA	Solid	8021B	55146
890-4795-2	SS02	Total/NA	Solid	8021B	55146
890-4795-3	SS03	Total/NA	Solid	8021B	55146
890-4795-4	SS04	Total/NA	Solid	8021B	55146
890-4795-6	SS06	Total/NA	Solid	8021B	55146
MB 880-55146/5-A	Method Blank	Total/NA	Solid	8021B	55146
LCS 880-55146/1-A	Lab Control Sample	Total/NA	Solid	8021B	55146
LCSD 880-55146/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55146
890-4794-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	55146
890-4794-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55146

Analysis Batch: 55689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Total/NA	Solid	Total BTEX	
890-4795-2	SS02	Total/NA	Solid	Total BTEX	
890-4795-3	SS03	Total/NA	Solid	Total BTEX	
890-4795-4	SS04	Total/NA	Solid	Total BTEX	
890-4795-5	SS05	Total/NA	Solid	Total BTEX	
890-4795-6	SS06	Total/NA	Solid	Total BTEX	
890-4795-7	SS07	Total/NA	Solid	Total BTEX	

Prep Batch: 55739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-5	SS05	Total/NA	Solid	5035	
890-4795-7	SS07	Total/NA	Solid	5035	
MB 880-55739/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55739/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55739/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-29648-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-29648-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-5	SS05	Total/NA	Solid	8021B	55739
890-4795-7	SS07	Total/NA	Solid	8021B	55739
MB 880-55739/5-A	Method Blank	Total/NA	Solid	8021B	55739
LCS 880-55739/1-A	Lab Control Sample	Total/NA	Solid	8021B	55739
LCSD 880-55739/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55739

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

GC VOA (Continued)

Analysis Batch: 55778 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-29648-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	55739
880-29648-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55739

GC Semi VOA

Prep Batch: 55159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Total/NA	Solid	8015NM Prep	
890-4795-2	SS02	Total/NA	Solid	8015NM Prep	
890-4795-3	SS03	Total/NA	Solid	8015NM Prep	
890-4795-4	SS04	Total/NA	Solid	8015NM Prep	
890-4795-5	SS05	Total/NA	Solid	8015NM Prep	
890-4795-6	SS06	Total/NA	Solid	8015NM Prep	
890-4795-7	SS07	Total/NA	Solid	8015NM Prep	
MB 880-55159/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55159/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55159/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4794-A-5-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4794-A-5-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Total/NA	Solid	8015B NM	55159
890-4795-2	SS02	Total/NA	Solid	8015B NM	55159
890-4795-3	SS03	Total/NA	Solid	8015B NM	55159
890-4795-4	SS04	Total/NA	Solid	8015B NM	55159
890-4795-5	SS05	Total/NA	Solid	8015B NM	55159
890-4795-6	SS06	Total/NA	Solid	8015B NM	55159
890-4795-7	SS07	Total/NA	Solid	8015B NM	55159
MB 880-55159/1-A	Method Blank	Total/NA	Solid	8015B NM	55159
LCS 880-55159/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55159
LCSD 880-55159/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55159
890-4794-A-5-D MS	Matrix Spike	Total/NA	Solid	8015B NM	55159
890-4794-A-5-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55159

Analysis Batch: 55335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Total/NA	Solid	8015 NM	
890-4795-2	SS02	Total/NA	Solid	8015 NM	
890-4795-3	SS03	Total/NA	Solid	8015 NM	
890-4795-4	SS04	Total/NA	Solid	8015 NM	
890-4795-5	SS05	Total/NA	Solid	8015 NM	
890-4795-6	SS06	Total/NA	Solid	8015 NM	
890-4795-7	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Soluble	Solid	DI Leach	
890-4795-2	SS02	Soluble	Solid	DI Leach	
890-4795-3	SS03	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

HPLC/IC (Continued)

Leach Batch: 55047 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-4	SS04	Soluble	Solid	DI Leach	
890-4795-5	SS05	Soluble	Solid	DI Leach	
890-4795-6	SS06	Soluble	Solid	DI Leach	
890-4795-7	SS07	Soluble	Solid	DI Leach	
MB 880-55047/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55047/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55047/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4795-2 MS	SS02	Soluble	Solid	DI Leach	
890-4795-2 MSD	SS02	Soluble	Solid	DI Leach	

Analysis Batch: 55167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4795-1	SS01	Soluble	Solid	300.0	55047
890-4795-2	SS02	Soluble	Solid	300.0	55047
890-4795-3	SS03	Soluble	Solid	300.0	55047
890-4795-4	SS04	Soluble	Solid	300.0	55047
890-4795-5	SS05	Soluble	Solid	300.0	55047
890-4795-6	SS06	Soluble	Solid	300.0	55047
890-4795-7	SS07	Soluble	Solid	300.0	55047
MB 880-55047/1-A	Method Blank	Soluble	Solid	300.0	55047
LCS 880-55047/2-A	Lab Control Sample	Soluble	Solid	300.0	55047
LCSD 880-55047/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55047
890-4795-2 MS	SS02	Soluble	Solid	300.0	55047
890-4795-2 MSD	SS02	Soluble	Solid	300.0	55047

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS01
Date Collected: 06/07/23 13:25
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 16:58	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55689	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55335	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 00:27	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 15:41	CH	EET MID

Client Sample ID: SS02
Date Collected: 06/07/23 13:30
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-2
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			4.96 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 18:49	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55689	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55335	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 00:48	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 15:47	CH	EET MID

Client Sample ID: SS03
Date Collected: 06/07/23 13:35
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-3
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	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 19:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55689	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55335	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 01:09	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 16:03	CH	EET MID

Client Sample ID: SS04
Date Collected: 06/07/23 13:40
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 19:30	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55689	06/16/23 12:59	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS04
Date Collected: 06/07/23 13:40
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-4
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			55335	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 01:31	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 16:08	CH	EET MID

Client Sample ID: SS05
Date Collected: 06/07/23 13:10
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	55739	06/16/23 17:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55778	06/19/23 21:12	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55689	06/20/23 12:15	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55335	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 01:52	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 16:24	CH	EET MID

Client Sample ID: SS06
Date Collected: 06/07/23 13:15
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-6
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			5.00 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	55553	06/15/23 21:34	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55689	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55335	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 02:35	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 16:30	CH	EET MID

Client Sample ID: SS07
Date Collected: 06/07/23 13:20
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-7
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			5.01 g	5 mL	55739	06/16/23 17:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55778	06/19/23 21:33	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55689	06/20/23 12:15	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55335	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 02:56	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Client Sample ID: SS07

Date Collected: 06/07/23 13:20
Date Received: 06/08/23 08:29

Lab Sample ID: 890-4795-7

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			4.98 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		5			55167	06/09/23 16:35	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: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

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: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

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: Buck Federal CTB

Job ID: 890-4795-1
SDG: 03D2024199

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4795-1	SS01	Solid	06/07/23 13:25	06/08/23 08:29	0.5
890-4795-2	SS02	Solid	06/07/23 13:30	06/08/23 08:29	0.5
890-4795-3	SS03	Solid	06/07/23 13:35	06/08/23 08:29	0.5
890-4795-4	SS04	Solid	06/07/23 13:40	06/08/23 08:29	0.5
890-4795-5	SS05	Solid	06/07/23 13:10	06/08/23 08:29	0.5
890-4795-6	SS06	Solid	06/07/23 13:15	06/08/23 08:29	0.5
890-4795-7	SS07	Solid	06/07/23 13:20	06/08/23 08:29	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum LLC	Company Name:	Ensolum LLC
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
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:	Buck Federal CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024199	Due Date:	5 Day
Project Location:	32.0377, -103.6965	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Ronni Hayes		
Cost Center #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TAM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6
Total Containers:		Corrected Temperature:	2.4

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

890-4795 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH	BTEX	Sample Comments
SS01	S	6/7/2023	1325	0.5	Grab	1		X	X	X	
SS02	S	6/7/2023	1330	0.5	Grab	1		X	X	X	
SS03	S	6/7/2023	1335	0.5	Grab	1		X	X	X	
SS04	S	6/7/2023	1340	0.5	Grab	1		X	X	X	
SS05	S	6/7/2023	1310	0.5	Grab	1		X	X	X	
SS06	S	6/7/2023	1315	0.5	Grab	1		X	X	X	
SS07	S	6/7/2023	1320	0.5	Grab	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	Amanda Stutz	6/8/23 0829			
3			4		
5			6		

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4795-1
SDG Number: 03D2024199

Login Number: 4795
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: 890-4795-1
SDG Number: 03D2024199

Login Number: 4795
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/09/23 10:21 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 7/31/2023 3:24:44 PM

JOB DESCRIPTION

Buck Federal CTB
SDG NUMBER 03D2024199

JOB NUMBER

890-4955-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

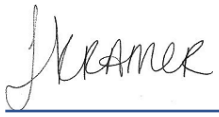
Eurofins Carlsbad

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: Buck Federal CTB

Laboratory Job ID: 890-4955-1
SDG: 03D2024199

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Job ID: 890-4955-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4955-1

Receipt
The samples were received on 7/17/2023 4:04 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 3.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01A (890-4955-1), BH01D (890-4955-2), BH01F (890-4955-3), BH02A (890-4955-4), BH02C (890-4955-5), BH03A (890-4955-6), BH03C (890-4955-7), BH04A (890-4955-8), BH04B (890-4955-9) and BH04D (890-4955-10).

The following samples were received and analyzed from an unpreserved bulk soil jar: BH01A (890-4955-1), BH01D (890-4955-2), BH01F (890-4955-3), BH02A (890-4955-4), BH02C (890-4955-5), BH03A (890-4955-6), BH03C (890-4955-7), BH04A (890-4955-8), BH04B (890-4955-9) and BH04D (890-4955-10).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01A (890-4955-1) and BH03A (890-4955-6). 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 for preparation batch 880-58407 and analytical batch 880-58347 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH03C (890-4955-7). 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 CCV was biased high for gasoline range hydrocarbons. Another CCV was analyzed and acceptable within 12 hours; therefore, the data was qualified and reported.(CCV 880-58792/58)

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH01A (890-4955-1), BH01D (890-4955-2), BH02C (890-4955-5), BH03A (890-4955-6), BH03C (890-4955-7) and (MB 880-58406/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH01A

Lab Sample ID: 890-4955-1
Matrix: Solid
Date Collected: 07/17/23 09:00
Date Received: 07/17/23 16:04
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.202	U	0.202		mg/Kg		07/24/23 17:46	07/25/23 04:28	100
Toluene	**3.89**		0.202		mg/Kg		07/24/23 17:46	07/25/23 04:28	100
Ethylbenzene	**2.19**		0.202		mg/Kg		07/24/23 17:46	07/25/23 04:28	100
m-Xylene & p-Xylene	**33.5**		0.403		mg/Kg		07/24/23 17:46	07/25/23 04:28	100
o-Xylene	**9.77**		0.202		mg/Kg		07/24/23 17:46	07/25/23 04:28	100
Xylenes, Total	**43.3**		0.403		mg/Kg		07/24/23 17:46	07/25/23 04:28	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/24/23 17:46*	*07/25/23 04:28*	*100*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*07/24/23 17:46*	*07/25/23 04:28*	*100*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**49.4**		0.403		mg/Kg			07/25/23 14:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3000**		49.8		mg/Kg			07/31/23 16:01	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	**1210**		49.8		mg/Kg		07/25/23 13:16	07/30/23 23:51	1
Diesel Range Organics (Over C10-C28)	**1790**		49.8		mg/Kg		07/25/23 13:16	07/30/23 23:51	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/25/23 13:16	07/30/23 23:51	1
Total TPH	**3000**		49.8		mg/Kg		07/25/23 13:16	07/30/23 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*149*	*S1+*	*70 - 130*	*07/25/23 13:16*	*07/30/23 23:51*	*1*
o-Terphenyl	*122*		*70 - 130*	*07/25/23 13:16*	*07/30/23 23:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**59.3**		5.01		mg/Kg			07/20/23 08:49	1

Client Sample ID: BH01D

Lab Sample ID: 890-4955-2
Matrix: Solid
Date Collected: 07/17/23 09:15
Date Received: 07/17/23 16:04
Sample Depth: 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 07:24	1
Toluene	**0.00841**		0.00200		mg/Kg		07/19/23 15:10	07/24/23 07:24	1
Ethylbenzene	**0.00349**		0.00200		mg/Kg		07/19/23 15:10	07/24/23 07:24	1
m-Xylene & p-Xylene	**0.0236**		0.00399		mg/Kg		07/19/23 15:10	07/24/23 07:24	1
o-Xylene	**0.00736**		0.00200		mg/Kg		07/19/23 15:10	07/24/23 07:24	1
Xylenes, Total	**0.0310**		0.00399		mg/Kg		07/19/23 15:10	07/24/23 07:24	1

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH01D

Date Collected: 07/17/23 09:15
Date Received: 07/17/23 16:04
Sample Depth: 4

Lab Sample ID: 890-4955-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/19/23 15:10*	*07/24/23 07:24*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*07/19/23 15:10*	*07/24/23 07:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0429**		0.00399	mg/Kg			07/24/23 17:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**80.2**		49.6	mg/Kg			07/31/23 16:01	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		07/25/23 13:16	07/31/23 00:13	1
Diesel Range Organics (Over C10-C28)	**80.2**		49.6	mg/Kg		07/25/23 13:16	07/31/23 00:13	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		07/25/23 13:16	07/31/23 00:13	1
Total TPH	**80.2**		49.6	mg/Kg		07/25/23 13:16	07/31/23 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*07/25/23 13:16*	*07/31/23 00:13*	*1*
o-Terphenyl	*121*		*70 - 130*	*07/25/23 13:16*	*07/31/23 00:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**115**		4.98	mg/Kg			07/20/23 09:05	1

Client Sample ID: BH01F

Date Collected: 07/17/23 09:30
Date Received: 07/17/23 16:04
Sample Depth: 6

Lab Sample ID: 890-4955-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.200	U	0.200	mg/Kg		07/24/23 17:46	07/25/23 04:48	100
Toluene	**2.78**		0.200	mg/Kg		07/24/23 17:46	07/25/23 04:48	100
Ethylbenzene	**0.474**		0.200	mg/Kg		07/24/23 17:46	07/25/23 04:48	100
m-Xylene & p-Xylene	**7.23**		0.401	mg/Kg		07/24/23 17:46	07/25/23 04:48	100
o-Xylene	**1.15**		0.200	mg/Kg		07/24/23 17:46	07/25/23 04:48	100
Xylenes, Total	**8.38**		0.401	mg/Kg		07/24/23 17:46	07/25/23 04:48	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/24/23 17:46*	*07/25/23 04:48*	*100*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/24/23 17:46*	*07/25/23 04:48*	*100*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**11.6**		0.401	mg/Kg			07/25/23 14:35	1

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH01F

Date Collected: 07/17/23 09:30
Date Received: 07/17/23 16:04
Sample Depth: 6

Lab Sample ID: 890-4955-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1930**		50.4		mg/Kg			07/31/23 16:01	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	**175**		50.4		mg/Kg		07/25/23 13:16	07/31/23 00:34	1
Diesel Range Organics (Over C10-C28)	**1750**		50.4		mg/Kg		07/25/23 13:16	07/31/23 00:34	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/25/23 13:16	07/31/23 00:34	1
Total TPH	**1930**		50.4		mg/Kg		07/25/23 13:16	07/31/23 00:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*07/25/23 13:16*	*07/31/23 00:34*	*1*
o-Terphenyl	*104*		*70 - 130*	*07/25/23 13:16*	*07/31/23 00:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71.5**		4.97		mg/Kg			07/20/23 09:10	1

Client Sample ID: BH02A

Date Collected: 07/17/23 10:50
Date Received: 07/17/23 16:04
Sample Depth: 1

Lab Sample ID: 890-4955-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 08:05	1
Toluene	**0.00224**		0.00198		mg/Kg		07/19/23 15:10	07/24/23 08:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 08:05	1
m-Xylene & p-Xylene	**0.00436**		0.00396		mg/Kg		07/19/23 15:10	07/24/23 08:05	1
o-Xylene	**0.00397**		0.00198		mg/Kg		07/19/23 15:10	07/24/23 08:05	1
Xylenes, Total	**0.00833**		0.00396		mg/Kg		07/19/23 15:10	07/24/23 08:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/19/23 15:10*	*07/24/23 08:05*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/19/23 15:10*	*07/24/23 08:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0106**		0.00396		mg/Kg			07/24/23 17:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**59.2**		50.5		mg/Kg			07/31/23 16:01	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	<50.5	U	50.5		mg/Kg		07/25/23 13:16	07/31/23 00:55	1
Diesel Range Organics (Over C10-C28)	**59.2**		50.5		mg/Kg		07/25/23 13:16	07/31/23 00:55	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/25/23 13:16	07/31/23 00:55	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH02A

Date Collected: 07/17/23 10:50
Date Received: 07/17/23 16:04
Sample Depth: 1

Lab Sample ID: 890-4955-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**59.2**		50.5		mg/Kg		07/25/23 13:16	07/31/23 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*07/25/23 13:16*	*07/31/23 00:55*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/25/23 13:16*	*07/31/23 00:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		5.02		mg/Kg			07/20/23 09:15	1

Client Sample ID: BH02C

Date Collected: 07/17/23 11:00
Date Received: 07/17/23 16:04
Sample Depth: 3

Lab Sample ID: 890-4955-5
Matrix: Solid

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		07/19/23 15:10	07/24/23 08:26	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/19/23 15:10	07/24/23 08:26	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/19/23 15:10	07/24/23 08:26	1
m-Xylene & p-Xylene	**0.00655**		0.00404		mg/Kg		07/19/23 15:10	07/24/23 08:26	1
o-Xylene	**0.00306**		0.00202		mg/Kg		07/19/23 15:10	07/24/23 08:26	1
Xylenes, Total	**0.00961**		0.00404		mg/Kg		07/19/23 15:10	07/24/23 08:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/19/23 15:10*	*07/24/23 08:26*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/19/23 15:10*	*07/24/23 08:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00961**		0.00404		mg/Kg			07/24/23 17:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			07/31/23 16:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		07/25/23 13:16	07/31/23 01:37	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/25/23 13:16	07/31/23 01:37	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/25/23 13:16	07/31/23 01:37	1
Total TPH	<49.7	U	49.7		mg/Kg		07/25/23 13:16	07/31/23 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*144*	*S1+*	*70 - 130*	*07/25/23 13:16*	*07/31/23 01:37*	*1*
o-Terphenyl	*132*	*S1+*	*70 - 130*	*07/25/23 13:16*	*07/31/23 01:37*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH02C

Date Collected: 07/17/23 11:00
Date Received: 07/17/23 16:04
Sample Depth: 3

Lab Sample ID: 890-4955-5
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**634**		4.95		mg/Kg			07/20/23 09:20	1

Client Sample ID: BH03A

Date Collected: 07/17/23 12:10
Date Received: 07/17/23 16:04
Sample Depth: 1

Lab Sample ID: 890-4955-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.499	U	0.499		mg/Kg		07/24/23 17:46	07/25/23 09:34	250
Toluene	**1.33**		0.499		mg/Kg		07/24/23 17:46	07/25/23 09:34	250
Ethylbenzene	**2.10**		0.499		mg/Kg		07/24/23 17:46	07/25/23 09:34	250
m-Xylene & p-Xylene	**5.91**		0.998		mg/Kg		07/24/23 17:46	07/25/23 09:34	250
o-Xylene	**3.32**		0.499		mg/Kg		07/24/23 17:46	07/25/23 09:34	250
Xylenes, Total	**9.23**		0.998		mg/Kg		07/24/23 17:46	07/25/23 09:34	250

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*07/24/23 17:46*	*07/25/23 09:34*	*250*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/24/23 17:46*	*07/25/23 09:34*	*250*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**12.7**		0.998		mg/Kg			07/25/23 14:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4810**		49.6		mg/Kg			07/31/23 16:01	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	**1600**		49.6		mg/Kg		07/25/23 13:16	07/31/23 01:59	1
Diesel Range Organics (Over C10-C28)	**3210**		49.6		mg/Kg		07/25/23 13:16	07/31/23 01:59	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/25/23 13:16	07/31/23 01:59	1
Total TPH	**4810**		49.6		mg/Kg		07/25/23 13:16	07/31/23 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*156*	*S1+*	*70 - 130*	*07/25/23 13:16*	*07/31/23 01:59*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/25/23 13:16*	*07/31/23 01:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4030**		25.2		mg/Kg			07/20/23 09:35	5

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH03C

Lab Sample ID: 890-4955-7
Matrix: Solid
Date Collected: 07/17/23 12:20
Date Received: 07/17/23 16:04
Sample Depth: 3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.662**		0.495		mg/Kg		07/24/23 17:46	07/25/23 09:54	250
Toluene	**13.3**		0.495		mg/Kg		07/24/23 17:46	07/25/23 09:54	250
Ethylbenzene	**1.90**		0.495		mg/Kg		07/24/23 17:46	07/25/23 09:54	250
m-Xylene & p-Xylene	**16.5**		0.990		mg/Kg		07/24/23 17:46	07/25/23 09:54	250
o-Xylene	**5.63**		0.495		mg/Kg		07/24/23 17:46	07/25/23 09:54	250
Xylenes, Total	**22.1**		0.990		mg/Kg		07/24/23 17:46	07/25/23 09:54	250

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*7*	*S1-*	*70 - 130*	*07/24/23 17:46*	*07/25/23 09:54*	*250*
1,4-Difluorobenzene (Surr)	*6*	*S1-*	*70 - 130*	*07/24/23 17:46*	*07/25/23 09:54*	*250*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**38.0**		0.990		mg/Kg			07/26/23 16:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**24000**		250		mg/Kg			07/31/23 16:01	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	**14200**		250		mg/Kg		07/25/23 13:16	07/31/23 07:30	5
Diesel Range Organics (Over C10-C28)	**9840**		250		mg/Kg		07/25/23 13:16	07/31/23 07:30	5
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/25/23 13:16	07/31/23 02:20	1
Total TPH	**24100**		50.1		mg/Kg		07/25/23 13:16	07/31/23 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*415*	*S1+*	*70 - 130*	*07/25/23 13:16*	*07/31/23 02:20*	*1*
1-Chlorooctane	*415*	*S1+*	*70 - 130*	*07/25/23 13:16*	*07/31/23 07:30*	*5*
o-Terphenyl	*117*		*70 - 130*	*07/25/23 13:16*	*07/31/23 02:20*	*1*
o-Terphenyl	*124*		*70 - 130*	*07/25/23 13:16*	*07/31/23 07:30*	*5*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5670**		49.9		mg/Kg			07/20/23 09:40	10

Client Sample ID: BH04A

Lab Sample ID: 890-4955-8
Matrix: Solid
Date Collected: 07/17/23 12:40
Date Received: 07/17/23 16:04
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 09:27	1
Toluene	**0.0102**		0.00200		mg/Kg		07/19/23 15:10	07/24/23 09:27	1
Ethylbenzene	**0.00299**		0.00200		mg/Kg		07/19/23 15:10	07/24/23 09:27	1
m-Xylene & p-Xylene	**0.0326**		0.00399		mg/Kg		07/19/23 15:10	07/24/23 09:27	1
o-Xylene	**0.00828**		0.00200		mg/Kg		07/19/23 15:10	07/24/23 09:27	1
Xylenes, Total	**0.0409**		0.00399		mg/Kg		07/19/23 15:10	07/24/23 09:27	1

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Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH04A

Lab Sample ID: 890-4955-8
Matrix: Solid
Date Collected: 07/17/23 12:40
Date Received: 07/17/23 16:04
Sample Depth: 1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	07/19/23 15:10	07/24/23 09:27	1
1,4-Difluorobenzene (Surr)	92		70 - 130	07/19/23 15:10	07/24/23 09:27	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0541**		0.00399	mg/Kg			07/24/23 17:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**359**		50.0	mg/Kg			07/31/23 16:01	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	**150**		50.0	mg/Kg		07/25/23 13:16	07/31/23 02:48	1
Diesel Range Organics (Over C10-C28)	**209**		50.0	mg/Kg		07/25/23 13:16	07/31/23 02:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/25/23 13:16	07/31/23 02:48	1
Total TPH	**359**		50.0	mg/Kg		07/25/23 13:16	07/31/23 02:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130	07/25/23 13:16	07/31/23 02:48	1
o-Terphenyl	119		70 - 130	07/25/23 13:16	07/31/23 02:48	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3600**		24.9	mg/Kg			07/20/23 09:46	5

Client Sample ID: BH04B

Lab Sample ID: 890-4955-9
Matrix: Solid
Date Collected: 07/17/23 12:45
Date Received: 07/17/23 16:04
Sample Depth: 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		07/19/23 15:10	07/24/23 09:47	1
Toluene	**0.00319**		0.00200	mg/Kg		07/19/23 15:10	07/24/23 09:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/19/23 15:10	07/24/23 09:47	1
m-Xylene & p-Xylene	**0.00599**		0.00400	mg/Kg		07/19/23 15:10	07/24/23 09:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/19/23 15:10	07/24/23 09:47	1
Xylenes, Total	**0.00599**		0.00400	mg/Kg		07/19/23 15:10	07/24/23 09:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	07/19/23 15:10	07/24/23 09:47	1
1,4-Difluorobenzene (Surr)	93		70 - 130	07/19/23 15:10	07/24/23 09:47	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00918**		0.00400	mg/Kg			07/24/23 17:01	1

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH04B

Lab Sample ID: 890-4955-9
Matrix: Solid
Date Collected: 07/17/23 12:45
Date Received: 07/17/23 16:04
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/31/23 16:01	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	<50.5	U	50.5		mg/Kg		07/25/23 13:16	07/31/23 03:10	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/25/23 13:16	07/31/23 03:10	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/25/23 13:16	07/31/23 03:10	1
Total TPH	<50.5	U	50.5		mg/Kg		07/25/23 13:16	07/31/23 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*07/25/23 13:16*	*07/31/23 03:10*	*1*
o-Terphenyl	*118*		*70 - 130*	*07/25/23 13:16*	*07/31/23 03:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4750**		49.6		mg/Kg			07/20/23 09:51	10

Client Sample ID: BH04D

Lab Sample ID: 890-4955-10
Matrix: Solid
Date Collected: 07/17/23 12:55
Date Received: 07/17/23 16:04
Sample Depth: 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 10:08	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 10:08	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 10:08	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/19/23 15:10	07/24/23 10:08	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 10:08	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/19/23 15:10	07/24/23 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/19/23 15:10*	*07/24/23 10:08*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/19/23 15:10*	*07/24/23 10:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/24/23 17:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/31/23 16:01	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		07/25/23 13:16	07/31/23 03:31	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/25/23 13:16	07/31/23 03:31	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/25/23 13:16	07/31/23 03:31	1

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Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH04D

Date Collected: 07/17/23 12:55
Date Received: 07/17/23 16:04
Sample Depth: 4

Lab Sample ID: 890-4955-10

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg		07/25/23 13:16	07/31/23 03:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*07/25/23 13:16*	*07/31/23 03:31*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/25/23 13:16*	*07/31/23 03:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4190**		50.2		mg/Kg			07/20/23 09:56	10

Surrogate Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-30749-A-1-C MS	Matrix Spike	90	97
880-30749-A-1-D MSD	Matrix Spike Duplicate	86	124
890-4951-A-1-B MS	Matrix Spike	54 S1-	94
890-4951-A-1-C MSD	Matrix Spike Duplicate	41 S1-	78
890-4955-1	BH01A	93	69 S1-
890-4955-2	BH01D	100	72
890-4955-3	BH01F	105	86
890-4955-4	BH02A	100	92
890-4955-5	BH02C	106	94
890-4955-6	BH03A	113	95
890-4955-7	BH03C	7 S1-	6 S1-
890-4955-8	BH04A	111	92
890-4955-9	BH04B	110	93
890-4955-10	BH04D	96	92
LCS 880-58056/1-A	Lab Control Sample	89	98
LCS 880-58407/1-A	Lab Control Sample	104	98
LCSD 880-58056/2-A	Lab Control Sample Dup	91	96
LCSD 880-58407/2-A	Lab Control Sample Dup	96	99
MB 880-57974/5-A	Method Blank	104	130
MB 880-58056/5-A	Method Blank	102	121
MB 880-58305/5-A	Method Blank	93	105
MB 880-58407/5-A	Method Blank	93	117

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)
890-4951-A-12-F MS	Matrix Spike	113	93
890-4951-A-12-G MSD	Matrix Spike Duplicate	115	95
890-4955-1	BH01A	149 S1+	122
890-4955-2	BH01D	131 S1+	121
890-4955-3	BH01F	116	104
890-4955-4	BH02A	120	109
890-4955-5	BH02C	144 S1+	132 S1+
890-4955-6	BH03A	156 S1+	115
890-4955-7	BH03C	415 S1+	117
890-4955-7	BH03C	415 S1+	124
890-4955-8	BH04A	127	119
890-4955-9	BH04B	127	118
890-4955-10	BH04D	120	115
LCS 880-58406/2-A	Lab Control Sample	100	109
LCSD 880-58406/3-A	Lab Control Sample Dup	100	107
MB 880-58406/1-A	Method Blank	162 S1+	155 S1+

Surrogate Legend

Surrogate Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57974/5-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57974

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/18/23 16:31	07/23/23 14:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/18/23 16:31*	*07/23/23 14:04*	*1*
1,4-Difluorobenzene (Surr)	*130*		*70 - 130*	*07/18/23 16:31*	*07/23/23 14:04*	*1*

Lab Sample ID: MB 880-58056/5-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58056

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/19/23 15:10	07/24/23 01:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*07/19/23 15:10*	*07/24/23 01:42*	*1*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*07/19/23 15:10*	*07/24/23 01:42*	*1*

Lab Sample ID: LCS 880-58056/1-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58056

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1000		mg/Kg		100	70 - 130		
Toluene			0.100	0.09678		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.08983		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1925		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09408		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-58056/2-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58056

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1004		mg/Kg		100	70 - 130	0	35

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

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

Lab Sample ID: LCSD 880-58056/2-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58056

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09518		mg/Kg		95	70 - 130	2	35
Ethylbenzene			0.100	0.09049		mg/Kg		90	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1982		mg/Kg		99	70 - 130	3	35
o-Xylene			0.100	0.09666		mg/Kg		97	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-4951-A-1-B MS
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58056

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F1	0.0994	0.06481	F1	mg/Kg		65	70 - 130
Toluene	<0.00202	U F1	0.0994	0.06718	F1	mg/Kg		67	70 - 130
Ethylbenzene	<0.00202	U	0.0994	0.07629		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00404	U	0.199	0.1584		mg/Kg		80	70 - 130
o-Xylene	<0.00202	U	0.0994	0.07646		mg/Kg		77	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*54*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-4951-A-1-C MSD
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58056

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	0.07502		mg/Kg		76	70 - 130	15	35
Toluene	<0.00202	U F1	0.0990	0.07520		mg/Kg		75	70 - 130	11	35
Ethylbenzene	<0.00202	U	0.0990	0.07566		mg/Kg		76	70 - 130	1	35
m-Xylene & p-Xylene	<0.00404	U	0.198	0.1456		mg/Kg		74	70 - 130	8	35
o-Xylene	<0.00202	U	0.0990	0.07642		mg/Kg		77	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*41*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*

Lab Sample ID: MB 880-58305/5-A
Matrix: Solid
Analysis Batch: 58347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58305

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/24/23 08:56	07/24/23 13:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/24/23 08:56	07/24/23 13:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/24/23 08:56	07/24/23 13:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/24/23 08:56	07/24/23 13:58	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

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

Lab Sample ID: MB 880-58305/5-A
Matrix: Solid
Analysis Batch: 58347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58305

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/24/23 08:56	07/24/23 13:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/24/23 08:56	07/24/23 13:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/24/23 08:56*	*07/24/23 13:58*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/24/23 08:56*	*07/24/23 13:58*	*1*

Lab Sample ID: MB 880-58407/5-A
Matrix: Solid
Analysis Batch: 58347

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			07/25/23 01:36	1
Toluene	<0.00200	U	0.00200		mg/Kg			07/25/23 01:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			07/25/23 01:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			07/25/23 01:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			07/25/23 01:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			07/25/23 01:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*07/25/23 01:36*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*		*07/25/23 01:36*	*1*

Lab Sample ID: LCS 880-58407/1-A
Matrix: Solid
Analysis Batch: 58347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58407

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1110		mg/Kg		111	70 - 130		
Toluene			0.100	0.1041		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1018		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2248		mg/Kg		112	70 - 130		
o-Xylene			0.100	0.1083		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-58407/2-A
Matrix: Solid
Analysis Batch: 58347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58407

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1104		mg/Kg		110	70 - 130	0	35
Toluene			0.100	0.1015		mg/Kg		101	70 - 130	3	35
Ethylbenzene			0.100	0.1005		mg/Kg		101	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2131		mg/Kg		107	70 - 130	5	35
o-Xylene			0.100	0.1014		mg/Kg		101	70 - 130	7	35

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 880-30749-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58347 — **Prep Batch: 58407**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0994	0.08101		mg/Kg		81	70 - 130
Toluene	<0.00198	U F1	0.0994	0.07726		mg/Kg		78	70 - 130
Ethylbenzene	<0.00198	U F1	0.0994	0.06019	F1	mg/Kg		61	70 - 130
m-Xylene & p-Xylene	<0.00396	U F1	0.199	0.1293	F1	mg/Kg		65	70 - 130
o-Xylene	<0.00198	U F1	0.0994	0.07050		mg/Kg		71	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-30749-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58347 — **Prep Batch: 58407**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0992	0.08268		mg/Kg		83	70 - 130	2	35
Toluene	<0.00198	U F1	0.0992	0.05680	F1	mg/Kg		57	70 - 130	31	35
Ethylbenzene	<0.00198	U F1	0.0992	0.04895	F1	mg/Kg		49	70 - 130	21	35
m-Xylene & p-Xylene	<0.00396	U F1	0.198	0.1317	F1	mg/Kg		66	70 - 130	2	35
o-Xylene	<0.00198	U F1	0.0992	0.06187	F1	mg/Kg		62	70 - 130	13	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	124		70 - 130

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

Lab Sample ID: MB 880-58406/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58792 — **Prep Batch: 58406**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/24/23 17:42	07/30/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/24/23 17:42	07/30/23 19:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/24/23 17:42	07/30/23 19:47	1
Total TPH	<50.0	U	50.0	mg/Kg		07/24/23 17:42	07/30/23 19:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	162	S1+	70 - 130	07/24/23 17:42	07/30/23 19:47	1
o-Terphenyl	155	S1+	70 - 130	07/24/23 17:42	07/30/23 19:47	1

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

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

Lab Sample ID: LCS 880-58406/2-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58406

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	869.2		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	938.4		mg/Kg		94	70 - 130		

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

Lab Sample ID: LCSD 880-58406/3-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58406

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	864.3		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	921.7		mg/Kg		92	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 890-4951-A-12-F MS
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58406

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	748.0		mg/Kg		74	70 - 130		
Diesel Range Organics (Over C10-C28)	255		1010	1047		mg/Kg		79	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 890-4951-A-12-G MSD
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58406

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	<50.3	U	1010	755.1		mg/Kg		75	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	255		1010	1061		mg/Kg		80	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

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

Lab Sample ID: 890-4951-A-12-G MSD
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58406

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58012/1-A
Matrix: Solid
Analysis Batch: 58102

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/20/23 08:34	1

Lab Sample ID: LCS 880-58012/2-A
Matrix: Solid
Analysis Batch: 58102

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	232.9		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-58012/3-A
Matrix: Solid
Analysis Batch: 58102

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	232.9		mg/Kg		93	90 - 110	0	20

Lab Sample ID: 890-4955-1 MS
Matrix: Solid
Analysis Batch: 58102

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	59.3		251	286.1		mg/Kg		91	90 - 110		

Lab Sample ID: 890-4955-1 MSD
Matrix: Solid
Analysis Batch: 58102

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	59.3		251	287.2		mg/Kg		91	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

GC VOA

Prep Batch: 57974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57974/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 58056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-2	BH01D	Total/NA	Solid	5035	
890-4955-4	BH02A	Total/NA	Solid	5035	
890-4955-5	BH02C	Total/NA	Solid	5035	
890-4955-8	BH04A	Total/NA	Solid	5035	
890-4955-9	BH04B	Total/NA	Solid	5035	
890-4955-10	BH04D	Total/NA	Solid	5035	
MB 880-58056/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58056/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58056/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4951-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-4951-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-2	BH01D	Total/NA	Solid	8021B	58056
890-4955-4	BH02A	Total/NA	Solid	8021B	58056
890-4955-5	BH02C	Total/NA	Solid	8021B	58056
890-4955-8	BH04A	Total/NA	Solid	8021B	58056
890-4955-9	BH04B	Total/NA	Solid	8021B	58056
890-4955-10	BH04D	Total/NA	Solid	8021B	58056
MB 880-57974/5-A	Method Blank	Total/NA	Solid	8021B	57974
MB 880-58056/5-A	Method Blank	Total/NA	Solid	8021B	58056
LCS 880-58056/1-A	Lab Control Sample	Total/NA	Solid	8021B	58056
LCSD 880-58056/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58056
890-4951-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	58056
890-4951-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58056

Prep Batch: 58305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-58305/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 58347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Total/NA	Solid	8021B	58407
890-4955-3	BH01F	Total/NA	Solid	8021B	58407
890-4955-6	BH03A	Total/NA	Solid	8021B	58407
890-4955-7	BH03C	Total/NA	Solid	8021B	58407
MB 880-58305/5-A	Method Blank	Total/NA	Solid	8021B	58305
MB 880-58407/5-A	Method Blank	Total/NA	Solid	8021B	
LCS 880-58407/1-A	Lab Control Sample	Total/NA	Solid	8021B	58407
LCSD 880-58407/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58407
880-30749-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	58407
880-30749-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58407

Analysis Batch: 58402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

GC VOA (Continued)

Analysis Batch: 58402 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-2	BH01D	Total/NA	Solid	Total BTEX	
890-4955-3	BH01F	Total/NA	Solid	Total BTEX	
890-4955-4	BH02A	Total/NA	Solid	Total BTEX	
890-4955-5	BH02C	Total/NA	Solid	Total BTEX	
890-4955-6	BH03A	Total/NA	Solid	Total BTEX	
890-4955-7	BH03C	Total/NA	Solid	Total BTEX	
890-4955-8	BH04A	Total/NA	Solid	Total BTEX	
890-4955-9	BH04B	Total/NA	Solid	Total BTEX	
890-4955-10	BH04D	Total/NA	Solid	Total BTEX	

Prep Batch: 58407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Total/NA	Solid	5035	
890-4955-3	BH01F	Total/NA	Solid	5035	
890-4955-6	BH03A	Total/NA	Solid	5035	
890-4955-7	BH03C	Total/NA	Solid	5035	
LCS 880-58407/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58407/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-30749-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-30749-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 58406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Total/NA	Solid	8015NM Prep	
890-4955-2	BH01D	Total/NA	Solid	8015NM Prep	
890-4955-3	BH01F	Total/NA	Solid	8015NM Prep	
890-4955-4	BH02A	Total/NA	Solid	8015NM Prep	
890-4955-5	BH02C	Total/NA	Solid	8015NM Prep	
890-4955-6	BH03A	Total/NA	Solid	8015NM Prep	
890-4955-7	BH03C	Total/NA	Solid	8015NM Prep	
890-4955-8	BH04A	Total/NA	Solid	8015NM Prep	
890-4955-9	BH04B	Total/NA	Solid	8015NM Prep	
890-4955-10	BH04D	Total/NA	Solid	8015NM Prep	
MB 880-58406/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58406/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58406/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4951-A-12-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4951-A-12-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Total/NA	Solid	8015B NM	58406
890-4955-2	BH01D	Total/NA	Solid	8015B NM	58406
890-4955-3	BH01F	Total/NA	Solid	8015B NM	58406
890-4955-4	BH02A	Total/NA	Solid	8015B NM	58406
890-4955-5	BH02C	Total/NA	Solid	8015B NM	58406
890-4955-6	BH03A	Total/NA	Solid	8015B NM	58406
890-4955-7	BH03C	Total/NA	Solid	8015B NM	58406
890-4955-7	BH03C	Total/NA	Solid	8015B NM	58406

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

GC Semi VOA (Continued)

Analysis Batch: 58792 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-8	BH04A	Total/NA	Solid	8015B NM	58406
890-4955-9	BH04B	Total/NA	Solid	8015B NM	58406
890-4955-10	BH04D	Total/NA	Solid	8015B NM	58406
MB 880-58406/1-A	Method Blank	Total/NA	Solid	8015B NM	58406
LCS 880-58406/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58406
LCSD 880-58406/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58406
890-4951-A-12-F MS	Matrix Spike	Total/NA	Solid	8015B NM	58406
890-4951-A-12-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	58406

Analysis Batch: 58920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Total/NA	Solid	8015 NM	
890-4955-2	BH01D	Total/NA	Solid	8015 NM	
890-4955-3	BH01F	Total/NA	Solid	8015 NM	
890-4955-4	BH02A	Total/NA	Solid	8015 NM	
890-4955-5	BH02C	Total/NA	Solid	8015 NM	
890-4955-6	BH03A	Total/NA	Solid	8015 NM	
890-4955-7	BH03C	Total/NA	Solid	8015 NM	
890-4955-8	BH04A	Total/NA	Solid	8015 NM	
890-4955-9	BH04B	Total/NA	Solid	8015 NM	
890-4955-10	BH04D	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Soluble	Solid	DI Leach	
890-4955-2	BH01D	Soluble	Solid	DI Leach	
890-4955-3	BH01F	Soluble	Solid	DI Leach	
890-4955-4	BH02A	Soluble	Solid	DI Leach	
890-4955-5	BH02C	Soluble	Solid	DI Leach	
890-4955-6	BH03A	Soluble	Solid	DI Leach	
890-4955-7	BH03C	Soluble	Solid	DI Leach	
890-4955-8	BH04A	Soluble	Solid	DI Leach	
890-4955-9	BH04B	Soluble	Solid	DI Leach	
890-4955-10	BH04D	Soluble	Solid	DI Leach	
MB 880-58012/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58012/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58012/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4955-1 MS	BH01A	Soluble	Solid	DI Leach	
890-4955-1 MSD	BH01A	Soluble	Solid	DI Leach	

Analysis Batch: 58102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-1	BH01A	Soluble	Solid	300.0	58012
890-4955-2	BH01D	Soluble	Solid	300.0	58012
890-4955-3	BH01F	Soluble	Solid	300.0	58012
890-4955-4	BH02A	Soluble	Solid	300.0	58012
890-4955-5	BH02C	Soluble	Solid	300.0	58012
890-4955-6	BH03A	Soluble	Solid	300.0	58012
890-4955-7	BH03C	Soluble	Solid	300.0	58012

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

HPLC/IC (Continued)

Analysis Batch: 58102 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4955-8	BH04A	Soluble	Solid	300.0	58012
890-4955-9	BH04B	Soluble	Solid	300.0	58012
890-4955-10	BH04D	Soluble	Solid	300.0	58012
MB 880-58012/1-A	Method Blank	Soluble	Solid	300.0	58012
LCS 880-58012/2-A	Lab Control Sample	Soluble	Solid	300.0	58012
LCSD 880-58012/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58012
890-4955-1 MS	BH01A	Soluble	Solid	300.0	58012
890-4955-1 MSD	BH01A	Soluble	Solid	300.0	58012

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH01A
Date Collected: 07/17/23 09:00
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58407	07/24/23 17:46	AJ	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	58347	07/25/23 04:28	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/25/23 14:35	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 23:51	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		1			58102	07/20/23 08:49	CH	EET MID

Client Sample ID: BH01D
Date Collected: 07/17/23 09:15
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 07:24	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/24/23 17:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 00:13	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		1			58102	07/20/23 09:05	CH	EET MID

Client Sample ID: BH01F
Date Collected: 07/17/23 09:30
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-3
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	58407	07/24/23 17:46	AJ	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	58347	07/25/23 04:48	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/25/23 14:35	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 00:34	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		1			58102	07/20/23 09:10	CH	EET MID

Client Sample ID: BH02A
Date Collected: 07/17/23 10:50
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-4
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			5.05 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 08:05	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/24/23 17:01	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH02A
Date Collected: 07/17/23 10:50
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-4
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			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 00:55	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		1			58102	07/20/23 09:15	CH	EET MID

Client Sample ID: BH02C
Date Collected: 07/17/23 11:00
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-5
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			4.95 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 08:26	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/24/23 17:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 01:37	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		1			58102	07/20/23 09:20	CH	EET MID

Client Sample ID: BH03A
Date Collected: 07/17/23 12:10
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-6
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	58407	07/24/23 17:46	AJ	EET MID
Total/NA	Analysis	8021B		250	5 mL	5 mL	58347	07/25/23 09:34	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/25/23 14:35	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 01:59	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		5			58102	07/20/23 09:35	CH	EET MID

Client Sample ID: BH03C
Date Collected: 07/17/23 12:20
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	58407	07/24/23 17:46	AJ	EET MID
Total/NA	Analysis	8021B		250	5 mL	5 mL	58347	07/25/23 09:54	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/26/23 16:39	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 02:20	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH03C
Date Collected: 07/17/23 12:20
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-7
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	8015NM Prep			9.99 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	58792	07/31/23 07:30	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		10			58102	07/20/23 09:40	CH	EET MID

Client Sample ID: BH04A
Date Collected: 07/17/23 12:40
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 09:27	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/24/23 17:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 02:48	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		5			58102	07/20/23 09:46	CH	EET MID

Client Sample ID: BH04B
Date Collected: 07/17/23 12:45
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-9
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			5.00 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 09:47	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/24/23 17:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 03:10	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		10			58102	07/20/23 09:51	CH	EET MID

Client Sample ID: BH04D
Date Collected: 07/17/23 12:55
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-10
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			5.05 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 10:08	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58402	07/24/23 17:01	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58920	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58406	07/25/23 13:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/31/23 03:31	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Client Sample ID: BH04D

Date Collected: 07/17/23 12:55
Date Received: 07/17/23 16:04

Lab Sample ID: 890-4955-10

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			4.98 g	50 mL	58012	07/19/23 10:11	KS	EET MID
Soluble	Analysis	300.0		10			58102	07/20/23 09:56	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: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

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: Buck Federal CTB

Job ID: 890-4955-1
SDG: 03D2024199

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4955-1	BH01A	Solid	07/17/23 09:00	07/17/23 16:04	1
890-4955-2	BH01D	Solid	07/17/23 09:15	07/17/23 16:04	4
890-4955-3	BH01F	Solid	07/17/23 09:30	07/17/23 16:04	6
890-4955-4	BH02A	Solid	07/17/23 10:50	07/17/23 16:04	1
890-4955-5	BH02C	Solid	07/17/23 11:00	07/17/23 16:04	3
890-4955-6	BH03A	Solid	07/17/23 12:10	07/17/23 16:04	1
890-4955-7	BH03C	Solid	07/17/23 12:20	07/17/23 16:04	3
890-4955-8	BH04A	Solid	07/17/23 12:40	07/17/23 16:04	1
890-4955-9	BH04B	Solid	07/17/23 12:45	07/17/23 16:04	2
890-4955-10	BH04D	Solid	07/17/23 12:55	07/17/23 16:04	4

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Buck Federal CTB	Turn Around	
Project Number:	03D2024199	☑ Routine ☐ Rush	
Project Location:	32.0375,-103.6966	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR#007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	8.2
Total Containers:		Corrected Temperature:	3.0

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

890-4955 Chain of Custody

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
BH01A	Soil	7/17/2023	900	1	Comp	1		x	x	x	
BH01D	Soil	7/17/2023	915	4	Comp	1		x	x	x	
BH01F	Soil	7/17/2023	930	6	Comp	1		x	x	x	
BH02A	Soil	7/17/2023	1050	1	Comp	1		x	x	x	
BH02C	Soil	7/17/2023	1100	3	Comp	1		x	x	x	
BH03A	Soil	7/17/2023	1210	1	Comp	1		x	x	x	
BH03C	Soil	7/17/2023	1220	3	Comp	1		x	x	x	
BH04A	Soil	7/17/2023	1240	1	Comp	1		x	x	x	
BH04B	Soil	7/17/2023	1245	2	Comp	1		x	x	x	
BH04D	Soil	7/17/2023	1255	4	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		7.17.23 1604	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 890-1375 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4955-1
Address: 1211 W Florida Ave,	Due Date Requested: 7/21/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Buck Federal CTB	Project #: 88001635			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note:
Preservation Code:													
BH01A (890-4955-1)	7/17/23	09 00 Mountain		Solid			X	X	X	X	X	1	
BH01D (890-4955-2)	7/17/23	09 15 Mountain		Solid			X	X	X	X	X	1	
BH01F (890-4955-3)	7/17/23	09 30 Mountain		Solid			X	X	X	X	X	1	
BH02A (890-4955-4)	7/17/23	10 50 Mountain		Solid			X	X	X	X	X	1	
BH02C (890-4955-5)	7/17/23	11 00 Mountain		Solid			X	X	X	X	X	1	
BH03A (890-4955-6)	7/17/23	12 10 Mountain		Solid			X	X	X	X	X	1	
BH03C (890-4955-7)	7/17/23	12 20 Mountain		Solid			X	X	X	X	X	1	
BH04A (890-4955-8)	7/17/23	12 40 Mountain		Solid			X	X	X	X	X	1	
BH04B (890-4955-9)	7/17/23	12 45 Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver: 06/08/2021

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone. 575-988-3199 Fax 575-988-3199

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-1375 2
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 2 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4955-1
Address: 1211 W Florida Ave	Due Date Requested: 7/21/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Buck Federal CTB	Project #: 88001635			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8016NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/6036FP_Calc BTEX	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BH04D (890-4955-10)	7/17/23	12 55 Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by:	Date	Time:		Method of Shipment:	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact. Δ Yes Δ No	Custody Seal No		Cooler Temperature(s) °C and Other Remarks.		

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4955-1
SDG Number: 03D2024199

Login Number: 4955
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: 890-4955-1
SDG Number: 03D2024199

Login Number: 4955
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 07/19/23 12:08 PM

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	

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 6/26/2023)
Date: Wednesday, June 21, 2023 3:44:17 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: Wednesday, June 21, 2023 7:38 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 6/26/2023)

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 June 26, 2023.

- Stratojet 31 State Com 8H / NAPP2314235805
  - Sampling Date: 6/26/2023 @ 10:00 AM MST
- Buck Federal CTB / NAPP2315731307

- Sampling Date: 6/29/2023 @ 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; Velez, Nelson, EMNRD
Subject:	RE: [EXTERNAL] COP - Sampling Notification (Week of 7/17/2023)
Date:	Thursday, July 13, 2023 2:20:01 PM
Attachments:	image005.jpg image006.png image007.png image008.png image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, July 13, 2023 9:18 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>; Laird, Jacob <Jacob.Laird@conocophillips.com>; brittany.esparza@conocophillips.com
Subject: [EXTERNAL] COP - Sampling Notification (Week of 7/17/2023)

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

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following sites the week of July 17, 2023.

- Buck Federal CTB / NAPP2315731307

- Sampling Date: 7/17/2023 @ 0900 MST

- Red Bull 35 Federal 1 Poly Line / NAPP2317142248
  - Sampling Date: 7/20/2023 @ 0900 MST

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

ENSOLUM

APPENDIX 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	NAPP2315731307
District RP	
Facility ID	fAPP2212245796
Application ID	

Release Notification

Responsible Party

Responsible Party	ConocoPhillips Company	OGRID	217817
Contact Name	Jacob Laird	Contact Telephone	(575) 703-5482
Contact email	Jacob.Laird@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2315731307
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.0375 Longitude -103.6966
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Buck Federal CTB	Site Type	Tank Battery
Date Release Discovered	June 1, 2023	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
O	17	26S	32E	Lea

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

Nature and Volume of Release

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

■ Crude Oil	Volume Released (bbls) 7.0179	Volume Recovered (bbls) 5
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by human error due to driver not checking tank levels.
The release was within a lined facility and leaked onto the pad.
Evaluation will be made of the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2315731307
District RP	
Facility ID	fAPP2212245796
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 6/6/2023

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Jocelyn Harimon Date: 06/06/2023

NAPP2315731307

Spill Calculation - Subsurface Spill - Rectangle									Remediation Recommendation	
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	On/Off Pad (dropdown)	Soil Spilled-Fluid Saturation (%.)	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	[redacted]	Total Estimated Contaminated Soil, uncompacted, 25% (yd^3.)	Current Rule of Thumb - RMR Handover Volume, (yd^3.)
Rectangle A	42.0	10.0	6.0	On-Pad	8.00%	37.38	2.99		9.72	
Rectangle B	20.0	18.0	4.0	On-Pad	8.00%	21.36	1.71		5.56	
Rectangle C	12.0	16.0	3.0	On-Pad	8.00%	8.54	0.68		2.22	
Rectangle D	12.0	8.0	3.0	On-Pad	8.00%	4.27	0.34		1.11	
Rectangle E	10.0	16.0	4.0	On-Pad	8.00%	9.49	0.76		2.47	
Rectangle F	13.0	8.0	3.0	On-Pad	8.00%	4.63	0.37		1.20	750
Rectangle G	3.0	2.0	3.0	On-Pad	8.00%	0.27	0.02		0.07	
Rectangle H	8.0	5.0	3.0	On-Pad	8.00%	1.78	0.14		0.46	
Rectangle I						0.00			0.00	
Rectangle J						0.00			0.00	
					Total Subsurface Volume Released:		7.0179		22.82	BU

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 224307
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/6/2023

Incident ID	NAPP2315731307
District RP	
Facility ID	fAPP2212245796
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>51 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2315731307
District RP	
Facility ID	fAPP2212245796
Application ID	

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

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: Jacob Laird Date: _____8/29/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: ___575-703-5482_____

OCD Only

Received by: Shelly Wells Date: 8/30/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2315731307
District RP	
Facility ID	fAPP2212245796
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: ___Jacob Laird_____ Date: _____8/29/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: __575-703-5482_____

OCD Only

Received by: Shelly Wells Date: 8/30/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Nelson Velez Date: 12/28/2023

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 259505
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan approved as written. Remediation Due date updated to March 27, 2024.	12/28/2023

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
ConocoPhillips Company
Buck Federal CTB
Incident Number NAPP2315731307

Photograph: 1 Date: 1/16/2024
Description: View of lined containment deemed to be in good condition, facing south.

Photograph: 2 Date: 1/16/2024
Description: View of lined containment deemed to be in good condition, facing northwest.

Photograph: 3 Date: 6/6/2024
Description: Excavation activities at BH03
View: Northeast

Photograph: 4 Date: 6/13/2024
Description: Excavation activities
View: East

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/14/2024 4:13:53 PM

JOB DESCRIPTION

BUCK FEDERAL CTB
03D2024199

JOB NUMBER

890-6778-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

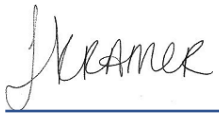
Eurofins Carlsbad

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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6/14/2024 4:13:53 PM

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

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Laboratory Job ID: 890-6778-1
SDG: 03D2024199

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-6778-1
Project/Site: BUCK FEDERAL CTB SDG: 03D2024199

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.
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: 890-6778-1
Project: BUCK FEDERAL CTB

Job ID: 890-6778-1 Eurofins Carlsbad

Job Narrative
890-6778-1

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 6/7/2024 3:47 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 1.0°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS 01 (890-6778-1), FS 02 (890-6778-2), FS 03 (890-6778-3), FS 04 (890-6778-4), FS 05 (890-6778-5), FS 06 (890-6778-6), SW 01 (890-6778-7) and SW 04 (890-6778-8).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS 01 (890-6778-1) and FS 02 (890-6778-2). 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: FS 03 (890-6778-3) and FS 04 (890-6778-4). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS 02 (890-6778-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Diesel Range Organics
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-83118 and analytical batch 880-83187 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-83118 and analytical batch 880-83187 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
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: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: FS 01

Lab Sample ID: 890-6778-1
Matrix: Solid
Date Collected: 06/06/24 13:14
Date Received: 06/07/24 15:47
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00742		0.00199		mg/Kg		06/10/24 08:42	06/10/24 14:03	1
Toluene	0.319		0.00199		mg/Kg		06/10/24 08:42	06/10/24 14:03	1
Ethylbenzene	0.242		0.00199		mg/Kg		06/10/24 08:42	06/10/24 14:03	1
m-Xylene & p-Xylene	0.383		0.00398		mg/Kg		06/10/24 08:42	06/10/24 14:03	1
o-Xylene	0.173		0.00199		mg/Kg		06/10/24 08:42	06/10/24 14:03	1
Xylenes, Total	0.556		0.00398		mg/Kg		06/10/24 08:42	06/10/24 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*275*	*S1+*	*70 - 130*	*06/10/24 08:42*	*06/10/24 14:03*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/10/24 08:42*	*06/10/24 14:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.12		0.00398		mg/Kg			06/10/24 14:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	471		49.9		mg/Kg			06/14/24 10:19	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	63.0		49.9		mg/Kg		06/13/24 13:35	06/14/24 10:19	1
Diesel Range Organics (Over C10-C28)	408	F1	49.9		mg/Kg		06/13/24 13:35	06/14/24 10:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/13/24 13:35	06/14/24 10:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*06/13/24 13:35*	*06/14/24 10:19*	*1*
o-Terphenyl	*93*		*70 - 130*	*06/13/24 13:35*	*06/14/24 10:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	71.5		4.95		mg/Kg			06/11/24 03:18	1

Client Sample ID: FS 02

Lab Sample ID: 890-6778-2
Matrix: Solid
Date Collected: 06/06/24 13:15
Date Received: 06/07/24 15:47
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00708		0.00200		mg/Kg		06/10/24 08:42	06/10/24 14:23	1
Toluene	0.202		0.0399		mg/Kg		06/11/24 08:39	06/11/24 15:23	20
Ethylbenzene	0.366		0.00200		mg/Kg		06/10/24 08:42	06/10/24 14:23	1
m-Xylene & p-Xylene	0.564		0.00399		mg/Kg		06/10/24 08:42	06/10/24 14:23	1
o-Xylene	0.250		0.00200		mg/Kg		06/10/24 08:42	06/10/24 14:23	1
Xylenes, Total	0.814		0.00399		mg/Kg		06/10/24 08:42	06/10/24 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*344*	*S1+*	*70 - 130*	*06/10/24 08:42*	*06/10/24 14:23*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: FS 02

Date Collected: 06/06/24 13:15
Date Received: 06/07/24 15:47
Sample Depth: 4'

Lab Sample ID: 890-6778-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*06/10/24 08:42*	*06/10/24 14:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**1.39**		0.00399		mg/Kg			06/11/24 15:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**537**		49.9		mg/Kg			06/14/24 11:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**114**		49.9		mg/Kg		06/13/24 13:35	06/14/24 11:08	1
Diesel Range Organics (Over C10-C28)	**423**		49.9		mg/Kg		06/13/24 13:35	06/14/24 11:08	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/13/24 13:35	06/14/24 11:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:08*	*1*
o-Terphenyl	*99*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**117**		5.05		mg/Kg			06/11/24 03:37	1

Client Sample ID: FS 03

Date Collected: 06/06/24 13:16
Date Received: 06/07/24 15:47
Sample Depth: 4'

Lab Sample ID: 890-6778-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0175**		0.00199		mg/Kg		06/10/24 08:42	06/10/24 16:39	1
Toluene	**0.0424**		0.00199		mg/Kg		06/10/24 08:42	06/10/24 16:39	1
Ethylbenzene	**0.0295**		0.00199		mg/Kg		06/10/24 08:42	06/10/24 16:39	1
m-Xylene & p-Xylene	**0.732**		0.00398		mg/Kg		06/10/24 08:42	06/10/24 16:39	1
o-Xylene	**0.217**		0.00199		mg/Kg		06/10/24 08:42	06/10/24 16:39	1
Xylenes, Total	**0.949**		0.00398		mg/Kg		06/10/24 08:42	06/10/24 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*332*	*S1+*	*70 - 130*	*06/10/24 08:42*	*06/10/24 16:39*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/10/24 08:42*	*06/10/24 16:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**1.04**		0.00398		mg/Kg			06/10/24 16:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**994**		50.0		mg/Kg			06/14/24 11:25	1

Client Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: FS 03

Lab Sample ID: 890-6778-3
Matrix: Solid
Date Collected: 06/06/24 13:16
Date Received: 06/07/24 15:47
Sample Depth: 4'

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	**343**		50.0		mg/Kg		06/13/24 13:35	06/14/24 11:25	1
Diesel Range Organics (Over C10-C28)	**651**		50.0		mg/Kg		06/13/24 13:35	06/14/24 11:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/13/24 13:35	06/14/24 11:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:25*	*1*
o-Terphenyl	*97*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**137**		5.04		mg/Kg			06/11/24 03:43	1

Client Sample ID: FS 04

Lab Sample ID: 890-6778-4
Matrix: Solid
Date Collected: 06/06/24 13:17
Date Received: 06/07/24 15:47
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/10/24 08:42	06/10/24 16:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/10/24 08:42	06/10/24 16:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/10/24 08:42	06/10/24 16:59	1
m-Xylene & p-Xylene	**0.0146**		0.00399		mg/Kg		06/10/24 08:42	06/10/24 16:59	1
o-Xylene	**0.00200**		0.00200		mg/Kg		06/10/24 08:42	06/10/24 16:59	1
Xylenes, Total	**0.0166**		0.00399		mg/Kg		06/10/24 08:42	06/10/24 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*	*06/10/24 08:42*	*06/10/24 16:59*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*06/10/24 08:42*	*06/10/24 16:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0166**		0.00399		mg/Kg			06/10/24 16:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**118**		49.9		mg/Kg			06/14/24 11:41	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		06/13/24 13:35	06/14/24 11:41	1
Diesel Range Organics (Over C10-C28)	**118**		49.9		mg/Kg		06/13/24 13:35	06/14/24 11:41	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/13/24 13:35	06/14/24 11:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:41*	*1*
o-Terphenyl	*89*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:41*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: FS 04

Lab Sample ID: 890-6778-4
Matrix: Solid
Date Collected: 06/06/24 13:17
Date Received: 06/07/24 15:47
Sample Depth: 4'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		4.96		mg/Kg			06/11/24 04:02	1

Client Sample ID: FS 05

Lab Sample ID: 890-6778-5
Matrix: Solid
Date Collected: 06/06/24 12:30
Date Received: 06/07/24 15:47
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		06/10/24 08:42	06/10/24 17:20	1
Toluene	<0.00201	U	0.00201		mg/Kg		06/10/24 08:42	06/10/24 17:20	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/10/24 08:42	06/10/24 17:20	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/10/24 08:42	06/10/24 17:20	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/10/24 08:42	06/10/24 17:20	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/10/24 08:42	06/10/24 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*06/10/24 08:42*	*06/10/24 17:20*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/10/24 08:42*	*06/10/24 17:20*	*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			06/10/24 17:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**103**		50.0		mg/Kg			06/14/24 11:57	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		06/13/24 13:35	06/14/24 11:57	1
Diesel Range Organics (Over C10-C28)	**103**		50.0		mg/Kg		06/13/24 13:35	06/14/24 11:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/13/24 13:35	06/14/24 11:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:57*	*1*
o-Terphenyl	*90*		*70 - 130*	*06/13/24 13:35*	*06/14/24 11:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**239**		5.02		mg/Kg			06/11/24 04:08	1

Client Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: FS 06

Date Collected: 06/06/24 12:40
Date Received: 06/07/24 15:47
Sample Depth: 1'

Lab Sample ID: 890-6778-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 17:40	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 17:40	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 17:40	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/10/24 08:42	06/10/24 17:40	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 17:40	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/10/24 08:42	06/10/24 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/10/24 08:42*	*06/10/24 17:40*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*06/10/24 08:42*	*06/10/24 17:40*	*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			06/10/24 17:40	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			06/14/24 12:14	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		06/13/24 13:35	06/14/24 12:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/13/24 13:35	06/14/24 12:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/13/24 13:35	06/14/24 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*06/13/24 13:35*	*06/14/24 12:14*	*1*
o-Terphenyl	*85*		*70 - 130*	*06/13/24 13:35*	*06/14/24 12:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**228**		5.04		mg/Kg			06/11/24 04:15	1

Client Sample ID: SW 01

Date Collected: 06/07/24 13:42
Date Received: 06/07/24 15:47
Sample Depth: 0 - 4'

Lab Sample ID: 890-6778-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 18:00	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 18:00	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 18:00	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		06/10/24 08:42	06/10/24 18:00	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/10/24 08:42	06/10/24 18:00	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		06/10/24 08:42	06/10/24 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*06/10/24 08:42*	*06/10/24 18:00*	*1*

Client Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: SW 01

Lab Sample ID: 890-6778-7
Matrix: Solid
Date Collected: 06/07/24 13:42
Date Received: 06/07/24 15:47
Sample Depth: 0 - 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/10/24 08:42*	*06/10/24 18:00*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			06/10/24 18:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**93.7**		49.8	mg/Kg			06/14/24 12:31	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		06/13/24 13:35	06/14/24 12:31	1
Diesel Range Organics (Over C10-C28)	**93.7**		49.8	mg/Kg		06/13/24 13:35	06/14/24 12:31	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		06/13/24 13:35	06/14/24 12:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*87*		*70 - 130*	*06/13/24 13:35*	*06/14/24 12:31*	*1*
o-Terphenyl	*88*		*70 - 130*	*06/13/24 13:35*	*06/14/24 12:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**98.9**		4.97	mg/Kg			06/11/24 04:21	1

Client Sample ID: SW 04

Lab Sample ID: 890-6778-8
Matrix: Solid
Date Collected: 06/07/24 12:42
Date Received: 06/07/24 15:47
Sample Depth: 0 - 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		06/10/24 08:42	06/10/24 18:21	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/10/24 08:42	06/10/24 18:21	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		06/10/24 08:42	06/10/24 18:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		06/10/24 08:42	06/10/24 18:21	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/10/24 08:42	06/10/24 18:21	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/10/24 08:42	06/10/24 18:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*06/10/24 08:42*	*06/10/24 18:21*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*06/10/24 08:42*	*06/10/24 18:21*	*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			06/10/24 18:21	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			06/14/24 12:48	1

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Client Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: SW 04

Date Collected: 06/07/24 12:42
Date Received: 06/07/24 15:47
Sample Depth: 0 - 1'

Lab Sample ID: 890-6778-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		06/13/24 13:35	06/14/24 12:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/13/24 13:35	06/14/24 12:48	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/13/24 13:35	06/14/24 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*06/13/24 13:35*	*06/14/24 12:48*	*1*
o-Terphenyl	*80*		*70 - 130*	*06/13/24 13:35*	*06/14/24 12:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**313**		5.02		mg/Kg			06/11/24 04:27	1

Surrogate Summary

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)										
880-44504-A-2-D MS	Matrix Spike	101	99										
880-44504-A-2-E MSD	Matrix Spike Duplicate	103	99										
890-6771-A-1-B MS	Matrix Spike	102	99										
890-6771-A-1-C MSD	Matrix Spike Duplicate	102	100										
890-6778-1	FS 01	275 S1+	94										
890-6778-2	FS 02	344 S1+	86										
890-6778-3	FS 03	332 S1+	100										
890-6778-4	FS 04	145 S1+	99										
890-6778-5	FS 05	104	102										
890-6778-6	FS 06	103	99										
890-6778-7	SW 01	104	100										
890-6778-8	SW 04	108	103										
LCS 880-82725/1-A	Lab Control Sample	102	100										
LCS 880-82870/1-A	Lab Control Sample	103	99										
LCSD 880-82725/2-A	Lab Control Sample Dup	100	99										
LCSD 880-82870/2-A	Lab Control Sample Dup	103	100										
MB 880-82725/5-A	Method Blank	102	97										
MB 880-82870/5-A	Method Blank	104	97										

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)										
890-6778-1	FS 01	89	93										
890-6778-1 MS	FS 01	97	85										
890-6778-1 MSD	FS 01	101	84										
890-6778-2	FS 02	96	99										
890-6778-3	FS 03	98	97										
890-6778-4	FS 04	98	89										
890-6778-5	FS 05	88	90										
890-6778-6	FS 06	88	85										
890-6778-7	SW 01	87	88										
890-6778-8	SW 04	84	80										
LCS 880-83118/2-A	Lab Control Sample	102	87										
LCSD 880-83118/3-A	Lab Control Sample Dup	122	103										
MB 880-83118/1-A	Method Blank	180 S1+	168 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-82725/5-A
Matrix: Solid
Analysis Batch: 82719

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 82725

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/10/24 08:42	06/10/24 11:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/10/24 08:42	06/10/24 11:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/10/24 08:42	06/10/24 11:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/10/24 08:42	06/10/24 11:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/10/24 08:42	06/10/24 11:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/10/24 08:42	06/10/24 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/10/24 08:42*	*06/10/24 11:39*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/10/24 08:42*	*06/10/24 11:39*	*1*

Lab Sample ID: LCS 880-82725/1-A
Matrix: Solid
Analysis Batch: 82719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 82725

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1014		mg/Kg		101	70 - 130		
Toluene			0.100	0.09534		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09619		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.2010		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09931		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-82725/2-A
Matrix: Solid
Analysis Batch: 82719

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 82725

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1011		mg/Kg		101	70 - 130	0	35
Toluene			0.100	0.09496		mg/Kg		95	70 - 130	0	35
Ethylbenzene			0.100	0.09610		mg/Kg		96	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2006		mg/Kg		100	70 - 130	0	35
o-Xylene			0.100	0.09956		mg/Kg		100	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-6771-A-1-B MS
Matrix: Solid
Analysis Batch: 82719

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 82725

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0996	0.09515		mg/Kg		96	70 - 130		
Toluene	<0.00199	U	0.0996	0.08875		mg/Kg		89	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

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

Lab Sample ID: 890-6771-A-1-B MS
Matrix: Solid
Analysis Batch: 82719

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 82725

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0996	0.08871		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1857		mg/Kg		93	70 - 130
o-Xylene	<0.00199	U	0.0996	0.09176		mg/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-6771-A-1-C MSD
Matrix: Solid
Analysis Batch: 82719

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 82725

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.09957		mg/Kg		101	70 - 130	5	35
Toluene	<0.00199	U	0.0990	0.09313		mg/Kg		94	70 - 130	5	35
Ethylbenzene	<0.00199	U	0.0990	0.09298		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1951		mg/Kg		99	70 - 130	5	35
o-Xylene	<0.00199	U	0.0990	0.09606		mg/Kg		97	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 880-82870/5-A
Matrix: Solid
Analysis Batch: 82868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 82870

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/11/24 08:39	06/11/24 11:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/11/24 08:39	06/11/24 11:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/11/24 08:39	06/11/24 11:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/11/24 08:39	06/11/24 11:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/11/24 08:39	06/11/24 11:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/11/24 08:39	06/11/24 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*06/11/24 08:39*	*06/11/24 11:10*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/11/24 08:39*	*06/11/24 11:10*	*1*

Lab Sample ID: LCS 880-82870/1-A
Matrix: Solid
Analysis Batch: 82868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 82870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09214		mg/Kg		92	70 - 130
Toluene	0.100	0.08856		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09085		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1897		mg/Kg		95	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

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

Lab Sample ID: LCS 880-82870/1-A
Matrix: Solid
Analysis Batch: 82868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 82870

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09505		mg/Kg		95	70 - 130		

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

Lab Sample ID: LCSD 880-82870/2-A
Matrix: Solid
Analysis Batch: 82868

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 82870

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09289		mg/Kg		93	70 - 130	1	35
Toluene			0.100	0.08921		mg/Kg		89	70 - 130	1	35
Ethylbenzene			0.100	0.09151		mg/Kg		92	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1906		mg/Kg		95	70 - 130	0	35
o-Xylene			0.100	0.09552		mg/Kg		96	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-44504-A-2-D MS
Matrix: Solid
Analysis Batch: 82868

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 82870

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0996	0.09893		mg/Kg		99	70 - 130		
Toluene	<0.00199	U	0.0996	0.09485		mg/Kg		95	70 - 130		
Ethylbenzene	<0.00199	U	0.0996	0.09715		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.199	0.2026		mg/Kg		102	70 - 130		
o-Xylene	<0.00199	U	0.0996	0.1011		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-44504-A-2-E MSD
Matrix: Solid
Analysis Batch: 82868

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 82870

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.09444		mg/Kg		95	70 - 130	5	35
Toluene	<0.00199	U	0.0990	0.09087		mg/Kg		92	70 - 130	4	35
Ethylbenzene	<0.00199	U	0.0990	0.09342		mg/Kg		94	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1948		mg/Kg		98	70 - 130	4	35
o-Xylene	<0.00199	U	0.0990	0.09735		mg/Kg		98	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

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

Lab Sample ID: 880-44504-A-2-E MSD
Matrix: Solid
Analysis Batch: 82868

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 82870

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

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

Lab Sample ID: MB 880-83118/1-A
Matrix: Solid
Analysis Batch: 83187

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 83118

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/13/24 13:35	06/14/24 08:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/13/24 13:35	06/14/24 08:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/13/24 13:35	06/14/24 08:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	180	S1+	70 - 130	06/13/24 13:35	06/14/24 08:13	1
o-Terphenyl	168	S1+	70 - 130	06/13/24 13:35	06/14/24 08:13	1

Lab Sample ID: LCS 880-83118/2-A
Matrix: Solid
Analysis Batch: 83187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 83118

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	904.2		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	929.8		mg/Kg		93	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: LCSD 880-83118/3-A
Matrix: Solid
Analysis Batch: 83187

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 83118

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1096		mg/Kg		110	70 - 130	19	20
Diesel Range Organics (Over C10-C28)			1000	1078		mg/Kg		108	70 - 130	15	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	103		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

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

Lab Sample ID: 890-6778-1 MS
Matrix: Solid
Analysis Batch: 83187

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 83118

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	63.0		999	959.6		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	408	F1	999	864.0	F1	mg/Kg		46	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 890-6778-1 MSD
Matrix: Solid
Analysis Batch: 83187

Client Sample ID: FS 01
Prep Type: Total/NA
Prep Batch: 83118

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	63.0		998	1062		mg/Kg		100	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	408	F1	998	884.5	F1	mg/Kg		48	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-82779/1-A
Matrix: Solid
Analysis Batch: 82808

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/11/24 01:30	1

Lab Sample ID: LCS 880-82779/2-A
Matrix: Solid
Analysis Batch: 82808

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	238.9		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-82779/3-A
Matrix: Solid
Analysis Batch: 82808

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	242.7		mg/Kg		97	90 - 110	2	20

QC Sample Results

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-6778-1 MS
Matrix: Solid
Analysis Batch: 82808

Client Sample ID: FS 01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	71.5		248	301.4		mg/Kg		93	90 - 110		

Lab Sample ID: 890-6778-1 MSD
Matrix: Solid
Analysis Batch: 82808

Client Sample ID: FS 01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	71.5		248	296.3		mg/Kg		91	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

GC VOA

Analysis Batch: 82719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Total/NA	Solid	8021B	82725
890-6778-2	FS 02	Total/NA	Solid	8021B	82725
890-6778-3	FS 03	Total/NA	Solid	8021B	82725
890-6778-4	FS 04	Total/NA	Solid	8021B	82725
890-6778-5	FS 05	Total/NA	Solid	8021B	82725
890-6778-6	FS 06	Total/NA	Solid	8021B	82725
890-6778-7	SW 01	Total/NA	Solid	8021B	82725
890-6778-8	SW 04	Total/NA	Solid	8021B	82725
MB 880-82725/5-A	Method Blank	Total/NA	Solid	8021B	82725
LCS 880-82725/1-A	Lab Control Sample	Total/NA	Solid	8021B	82725
LCSD 880-82725/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	82725
890-6771-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	82725
890-6771-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	82725

Prep Batch: 82725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Total/NA	Solid	5035	
890-6778-2	FS 02	Total/NA	Solid	5035	
890-6778-3	FS 03	Total/NA	Solid	5035	
890-6778-4	FS 04	Total/NA	Solid	5035	
890-6778-5	FS 05	Total/NA	Solid	5035	
890-6778-6	FS 06	Total/NA	Solid	5035	
890-6778-7	SW 01	Total/NA	Solid	5035	
890-6778-8	SW 04	Total/NA	Solid	5035	
MB 880-82725/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-82725/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-82725/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6771-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-6771-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 82854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Total/NA	Solid	Total BTEX	
890-6778-2	FS 02	Total/NA	Solid	Total BTEX	
890-6778-3	FS 03	Total/NA	Solid	Total BTEX	
890-6778-4	FS 04	Total/NA	Solid	Total BTEX	
890-6778-5	FS 05	Total/NA	Solid	Total BTEX	
890-6778-6	FS 06	Total/NA	Solid	Total BTEX	
890-6778-7	SW 01	Total/NA	Solid	Total BTEX	
890-6778-8	SW 04	Total/NA	Solid	Total BTEX	

Analysis Batch: 82868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-2	FS 02	Total/NA	Solid	8021B	82870
MB 880-82870/5-A	Method Blank	Total/NA	Solid	8021B	82870
LCS 880-82870/1-A	Lab Control Sample	Total/NA	Solid	8021B	82870
LCSD 880-82870/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	82870
880-44504-A-2-D MS	Matrix Spike	Total/NA	Solid	8021B	82870
880-44504-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	82870

QC Association Summary

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

GC VOA

Prep Batch: 82870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-2	FS 02	Total/NA	Solid	5035	
MB 880-82870/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-82870/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-82870/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-44504-A-2-D MS	Matrix Spike	Total/NA	Solid	5035	
880-44504-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 83118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Total/NA	Solid	8015NM Prep	
890-6778-2	FS 02	Total/NA	Solid	8015NM Prep	
890-6778-3	FS 03	Total/NA	Solid	8015NM Prep	
890-6778-4	FS 04	Total/NA	Solid	8015NM Prep	
890-6778-5	FS 05	Total/NA	Solid	8015NM Prep	
890-6778-6	FS 06	Total/NA	Solid	8015NM Prep	
890-6778-7	SW 01	Total/NA	Solid	8015NM Prep	
890-6778-8	SW 04	Total/NA	Solid	8015NM Prep	
MB 880-83118/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-83118/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-83118/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6778-1 MS	FS 01	Total/NA	Solid	8015NM Prep	
890-6778-1 MSD	FS 01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 83187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Total/NA	Solid	8015B NM	83118
890-6778-2	FS 02	Total/NA	Solid	8015B NM	83118
890-6778-3	FS 03	Total/NA	Solid	8015B NM	83118
890-6778-4	FS 04	Total/NA	Solid	8015B NM	83118
890-6778-5	FS 05	Total/NA	Solid	8015B NM	83118
890-6778-6	FS 06	Total/NA	Solid	8015B NM	83118
890-6778-7	SW 01	Total/NA	Solid	8015B NM	83118
890-6778-8	SW 04	Total/NA	Solid	8015B NM	83118
MB 880-83118/1-A	Method Blank	Total/NA	Solid	8015B NM	83118
LCS 880-83118/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	83118
LCSD 880-83118/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	83118
890-6778-1 MS	FS 01	Total/NA	Solid	8015B NM	83118
890-6778-1 MSD	FS 01	Total/NA	Solid	8015B NM	83118

Analysis Batch: 83268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Total/NA	Solid	8015 NM	
890-6778-2	FS 02	Total/NA	Solid	8015 NM	
890-6778-3	FS 03	Total/NA	Solid	8015 NM	
890-6778-4	FS 04	Total/NA	Solid	8015 NM	
890-6778-5	FS 05	Total/NA	Solid	8015 NM	
890-6778-6	FS 06	Total/NA	Solid	8015 NM	
890-6778-7	SW 01	Total/NA	Solid	8015 NM	
890-6778-8	SW 04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

HPLC/IC

Leach Batch: 82779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Soluble	Solid	DI Leach	
890-6778-2	FS 02	Soluble	Solid	DI Leach	
890-6778-3	FS 03	Soluble	Solid	DI Leach	
890-6778-4	FS 04	Soluble	Solid	DI Leach	
890-6778-5	FS 05	Soluble	Solid	DI Leach	
890-6778-6	FS 06	Soluble	Solid	DI Leach	
890-6778-7	SW 01	Soluble	Solid	DI Leach	
890-6778-8	SW 04	Soluble	Solid	DI Leach	
MB 880-82779/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-82779/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-82779/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6778-1 MS	FS 01	Soluble	Solid	DI Leach	
890-6778-1 MSD	FS 01	Soluble	Solid	DI Leach	

Analysis Batch: 82808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6778-1	FS 01	Soluble	Solid	300.0	82779
890-6778-2	FS 02	Soluble	Solid	300.0	82779
890-6778-3	FS 03	Soluble	Solid	300.0	82779
890-6778-4	FS 04	Soluble	Solid	300.0	82779
890-6778-5	FS 05	Soluble	Solid	300.0	82779
890-6778-6	FS 06	Soluble	Solid	300.0	82779
890-6778-7	SW 01	Soluble	Solid	300.0	82779
890-6778-8	SW 04	Soluble	Solid	300.0	82779
MB 880-82779/1-A	Method Blank	Soluble	Solid	300.0	82779
LCS 880-82779/2-A	Lab Control Sample	Soluble	Solid	300.0	82779
LCSD 880-82779/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	82779
890-6778-1 MS	FS 01	Soluble	Solid	300.0	82779
890-6778-1 MSD	FS 01	Soluble	Solid	300.0	82779

Lab Chronicle

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: FS 01

Date Collected: 06/06/24 13:14
Date Received: 06/07/24 15:47

Lab Sample ID: 890-6778-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 14:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/10/24 14:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			83268	06/14/24 10:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 10:19	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 03:18	CH	EET MID

Client Sample ID: FS 02

Date Collected: 06/06/24 13:15
Date Received: 06/07/24 15:47

Lab Sample ID: 890-6778-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 14:23	MNR	EET MID
Total/NA	Prep	5035			5.01 g	5 mL	82870	06/11/24 08:39	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	82868	06/11/24 15:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/11/24 15:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			83268	06/14/24 11:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 11:08	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 03:37	CH	EET MID

Client Sample ID: FS 03

Date Collected: 06/06/24 13:16
Date Received: 06/07/24 15:47

Lab Sample ID: 890-6778-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 16:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/10/24 16:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			83268	06/14/24 11:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 11:25	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 03:43	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: FS 04

Lab Sample ID: 890-6778-4

Date Collected: 06/06/24 13:17
Matrix: Solid
Date Received: 06/07/24 15:47

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	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 16:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/10/24 16:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			83268	06/14/24 11:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 11:41	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 04:02	CH	EET MID

Client Sample ID: FS 05

Lab Sample ID: 890-6778-5

Date Collected: 06/06/24 12:30
Matrix: Solid
Date Received: 06/07/24 15:47

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	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 17:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/10/24 17:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			83268	06/14/24 11:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 11:57	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 04:08	CH	EET MID

Client Sample ID: FS 06

Lab Sample ID: 890-6778-6

Date Collected: 06/06/24 12:40
Matrix: Solid
Date Received: 06/07/24 15:47

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	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 17:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/10/24 17:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			83268	06/14/24 12:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 12:14	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 04:15	CH	EET MID

Client Sample ID: SW 01

Lab Sample ID: 890-6778-7

Date Collected: 06/07/24 13:42
Matrix: Solid
Date Received: 06/07/24 15:47

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	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 18:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/10/24 18:00	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Client Sample ID: SW 01

Date Collected: 06/07/24 13:42
Date Received: 06/07/24 15:47

Lab Sample ID: 890-6778-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			83268	06/14/24 12:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 12:31	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 04:21	CH	EET MID

Client Sample ID: SW 04

Date Collected: 06/07/24 12:42
Date Received: 06/07/24 15:47

Lab Sample ID: 890-6778-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	82725	06/10/24 08:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	82719	06/10/24 18:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			82854	06/10/24 18:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			83268	06/14/24 12:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	83118	06/13/24 13:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	83187	06/14/24 12:48	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	82779	06/10/24 11:25	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	82808	06/11/24 04:27	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: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

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: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

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: BUCK FEDERAL CTB

Job ID: 890-6778-1
SDG: 03D2024199

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6778-1	FS 01	Solid	06/06/24 13:14	06/07/24 15:47	4'
890-6778-2	FS 02	Solid	06/06/24 13:15	06/07/24 15:47	4'
890-6778-3	FS 03	Solid	06/06/24 13:16	06/07/24 15:47	4'
890-6778-4	FS 04	Solid	06/06/24 13:17	06/07/24 15:47	4'
890-6778-5	FS 05	Solid	06/06/24 12:30	06/07/24 15:47	1'
890-6778-6	FS 06	Solid	06/06/24 12:40	06/07/24 15:47	1'
890-6778-7	SW 01	Solid	06/07/24 13:42	06/07/24 15:47	0 - 4'
890-6778-8	SW 04	Solid	06/07/24 12:42	06/07/24 15:47	0 - 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) 58[illegible] TX (806) 794-1296
Hobbs, NM (575) 392

890-6778 Chain of Custody

Work Order No: _____

6/14/2024

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
Project:
g: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Buck Federal CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024199	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Kaoru Shimada		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TM0067
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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters	CHLORIDES (4500)	TPH (8015M)	BTEX (8021)	RCI	Paint Filter Test	TCLP	VOC	SVOC	Sample Comments
FS01	Soil	6/6/2024	1314	4'	Comp	1			x	x	x						Incident ID:
FS02	Soil	6/6/2024	1315	4'	Comp	1			x	x	x						
FS03	Soil	6/6/2024	1316	4'	Comp	1			x	x	x						
FS04	Soil	6/6/2024	1317	4'	Comp	1			x	x	x						Cost Center:
FS05	Soil	6/6/2024	1230	1'	Comp	1			x	x	x						
FS06	Soil	6/6/2024	1240	1'	Comp	1			x	x	x						AFE:
SW01	Soil	6/7/2024	1342	0-4'	Comp	1			x	x	x						
SW04	Soil	6/7/2024	1242	0-1'	Comp	1			x	x	x						

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6/7 1547	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6778-1
SDG Number: 03D2024199

Login Number: 6778
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: 890-6778-1
SDG Number: 03D2024199

Login Number: 6778
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/10/24 09:45 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 6/18/2024 6:08:52 PM

JOB DESCRIPTION

Buck Federal CTB
Lea County, New Mexico

JOB NUMBER

880-44746-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

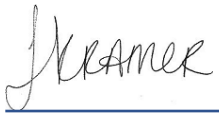
Eurofins Midland

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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6/18/2024 6:08:52 PM

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

Client: Ensolum
Project/Site: Buck Federal CTB

Laboratory Job ID: 880-44746-1
SDG: Lea County, New Mexico

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-44746-1
Project/Site: Buck Federal CTB SDG: Lea County, New Mexico

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum Job ID: 880-44746-1
Project: Buck Federal CTB

Job ID: 880-44746-1 Eurofins Midland

Job Narrative
880-44746-1

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 6/13/2024 2:50 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 3.0°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW02 (880-44746-1), SW03 (880-44746-2), SW05 (880-44746-3), FS07 (880-44746-4) and FS08 (880-44746-5).

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

Diesel Range Organics
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-83154 and analytical batch 880-83278 was outside the control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SW02 (880-44746-1), SW03 (880-44746-2), SW05 (880-44746-3), FS07 (880-44746-4), (880-44729-A-11-E), (880-44729-A-11-F MS) and (880-44729-A-11-G MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-83154 and analytical batch 880-83278 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-83278 recovered below the lower control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-83278/47).

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

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

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Client Sample ID: SW02

Date Collected: 06/13/24 10:25
Date Received: 06/13/24 14:50
Sample Depth: 0-4'

Lab Sample ID: 880-44746-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/14/24 09:16	06/14/24 14:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/14/24 09:16	06/14/24 14:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/14/24 09:16	06/14/24 14:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/14/24 09:16	06/14/24 14:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/14/24 09:16	06/14/24 14:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/14/24 09:16	06/14/24 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/14/24 09:16*	*06/14/24 14:05*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/14/24 09:16*	*06/14/24 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			06/14/24 14:05	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			06/17/24 23:27	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		06/13/24 16:25	06/17/24 23:27	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/13/24 16:25	06/17/24 23:27	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/13/24 16:25	06/17/24 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*71*		*70 - 130*	*06/13/24 16:25*	*06/17/24 23:27*	*1*
o-Terphenyl	*63*	*S1-*	*70 - 130*	*06/13/24 16:25*	*06/17/24 23:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.3**		4.96		mg/Kg			06/14/24 13:23	1

Client Sample ID: SW03

Date Collected: 06/13/24 10:30
Date Received: 06/13/24 14:50
Sample Depth: 0-4'

Lab Sample ID: 880-44746-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		06/14/24 09:16	06/14/24 17:13	1
Toluene	<0.00198	U	0.00198		mg/Kg		06/14/24 09:16	06/14/24 17:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/14/24 09:16	06/14/24 17:13	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		06/14/24 09:16	06/14/24 17:13	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/14/24 09:16	06/14/24 17:13	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		06/14/24 09:16	06/14/24 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/14/24 09:16*	*06/14/24 17:13*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Client Sample ID: SW03

Date Collected: 06/13/24 10:30
Date Received: 06/13/24 14:50
Sample Depth: 0-4'

Lab Sample ID: 880-44746-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/14/24 09:16*	*06/14/24 17:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			06/14/24 17:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**53.3**		49.9	mg/Kg			06/17/24 23:43	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	<49.9	U	49.9	mg/Kg		06/13/24 16:25	06/17/24 23:43	1
Diesel Range Organics (Over C10-C28)	**53.3**		49.9	mg/Kg		06/13/24 16:25	06/17/24 23:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/13/24 16:25	06/17/24 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*06/13/24 16:25*	*06/17/24 23:43*	*1*
o-Terphenyl	*65*	*S1-*	*70 - 130*	*06/13/24 16:25*	*06/17/24 23:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.7**		5.00	mg/Kg			06/14/24 12:48	1

Client Sample ID: SW05

Date Collected: 06/13/24 10:35
Date Received: 06/13/24 14:50
Sample Depth: 0-4'

Lab Sample ID: 880-44746-3
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		06/14/24 09:16	06/14/24 17:34	1
Toluene	<0.00201	U	0.00201	mg/Kg		06/14/24 09:16	06/14/24 17:34	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/14/24 09:16	06/14/24 17:34	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/14/24 09:16	06/14/24 17:34	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/14/24 09:16	06/14/24 17:34	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/14/24 09:16	06/14/24 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/14/24 09:16*	*06/14/24 17:34*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/14/24 09:16*	*06/14/24 17:34*	*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			06/14/24 17:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.1**		49.9	mg/Kg			06/17/24 23:59	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Client Sample ID: SW05

Lab Sample ID: 880-44746-3
Matrix: Solid
Date Collected: 06/13/24 10:35
Date Received: 06/13/24 14:50
Sample Depth: 0-4'

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		06/13/24 16:25	06/17/24 23:59	1
Diesel Range Organics (Over C10-C28)	**57.1**		49.9		mg/Kg		06/13/24 16:25	06/17/24 23:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/13/24 16:25	06/17/24 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*06/13/24 16:25*	*06/17/24 23:59*	*1*
o-Terphenyl	*66*	*S1-*	*70 - 130*	*06/13/24 16:25*	*06/17/24 23:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**199**		5.02		mg/Kg			06/14/24 12:53	1

Client Sample ID: FS07

Lab Sample ID: 880-44746-4
Matrix: Solid
Date Collected: 06/13/24 10:40
Date Received: 06/13/24 14:50
Sample Depth: 4'

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		06/14/24 09:16	06/14/24 17:54	1
Toluene	<0.00201	U	0.00201		mg/Kg		06/14/24 09:16	06/14/24 17:54	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/14/24 09:16	06/14/24 17:54	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/14/24 09:16	06/14/24 17:54	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/14/24 09:16	06/14/24 17:54	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/14/24 09:16	06/14/24 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/14/24 09:16*	*06/14/24 17:54*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/14/24 09:16*	*06/14/24 17:54*	*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			06/14/24 17:54	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			06/18/24 00:17	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		06/13/24 16:25	06/18/24 00:17	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/13/24 16:25	06/18/24 00:17	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/13/24 16:25	06/18/24 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*64*	*S1-*	*70 - 130*	*06/13/24 16:25*	*06/18/24 00:17*	*1*
o-Terphenyl	*57*	*S1-*	*70 - 130*	*06/13/24 16:25*	*06/18/24 00:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Client Sample ID: FS07

Date Collected: 06/13/24 10:40
Date Received: 06/13/24 14:50
Sample Depth: 4'

Lab Sample ID: 880-44746-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**85.6**		4.98		mg/Kg			06/14/24 13:08	1

Client Sample ID: FS08

Date Collected: 06/13/24 10:45
Date Received: 06/13/24 14:50
Sample Depth: 4'

Lab Sample ID: 880-44746-5
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		06/14/24 09:16	06/14/24 18:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/14/24 09:16	06/14/24 18:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/14/24 09:16	06/14/24 18:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/14/24 09:16	06/14/24 18:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/14/24 09:16	06/14/24 18:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/14/24 09:16	06/14/24 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/14/24 09:16*	*06/14/24 18:15*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/14/24 09:16*	*06/14/24 18:15*	*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			06/14/24 18:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**890**		49.9		mg/Kg			06/18/24 01:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**890**		49.9		mg/Kg		06/13/24 16:25	06/18/24 01:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/13/24 16:25	06/18/24 01:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/13/24 16:25	06/18/24 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*06/13/24 16:25*	*06/18/24 01:06*	*1*
o-Terphenyl	*73*		*70 - 130*	*06/13/24 16:25*	*06/18/24 01:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.82**		5.03		mg/Kg			06/14/24 13:13	1

Surrogate Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

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)
880-44746-1	SW02	102	102
880-44746-2	SW03	103	102
880-44746-3	SW05	102	101
880-44746-4	FS07	103	101
880-44746-5	FS08	103	101
LCS 880-83122/1-A	Lab Control Sample	101	100
LCSD 880-83122/2-A	Lab Control Sample Dup	102	100
MB 880-83122/5-A	Method Blank	101	99

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-44746-1	SW02	71	63 S1-
880-44746-2	SW03	73	65 S1-
880-44746-3	SW05	75	66 S1-
880-44746-4	FS07	64 S1-	57 S1-
880-44746-5	FS08	84	73
LCS 880-83154/2-A	Lab Control Sample	101	93
LCSD 880-83154/3-A	Lab Control Sample Dup	84	78
MB 880-83154/1-A	Method Blank	79	68 S1-

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-83122/5-A
Matrix: Solid
Analysis Batch: 83198

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 83122

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/13/24 13:48	06/14/24 10:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/13/24 13:48	06/14/24 10:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/13/24 13:48	06/14/24 10:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/13/24 13:48	06/14/24 10:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/13/24 13:48	06/14/24 10:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/13/24 13:48	06/14/24 10:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/13/24 13:48*	*06/14/24 10:58*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*06/13/24 13:48*	*06/14/24 10:58*	*1*

Lab Sample ID: LCS 880-83122/1-A
Matrix: Solid
Analysis Batch: 83198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 83122

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1057		mg/Kg		106	70 - 130		
Toluene			0.100	0.1029		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.1013		mg/Kg		101	70 - 130		
m-Xylene & p-Xylene			0.200	0.2147		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1059		mg/Kg		106	70 - 130		

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

Lab Sample ID: LCSD 880-83122/2-A
Matrix: Solid
Analysis Batch: 83198

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 83122

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1091		mg/Kg		109	70 - 130	3	35
Toluene			0.100	0.1061		mg/Kg		106	70 - 130	3	35
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2226		mg/Kg		111	70 - 130	4	35
o-Xylene			0.100	0.1097		mg/Kg		110	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

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

Lab Sample ID: MB 880-83154/1-A
Matrix: Solid
Analysis Batch: 83278

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 83154

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/13/24 16:25	06/17/24 18:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/13/24 16:25	06/17/24 18:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/13/24 16:25	06/17/24 18:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*06/13/24 16:25*	*06/17/24 18:04*	*1*
o-Terphenyl	*68*	*S1-*	*70 - 130*	*06/13/24 16:25*	*06/17/24 18:04*	*1*

Lab Sample ID: LCS 880-83154/2-A
Matrix: Solid
Analysis Batch: 83278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 83154

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1046		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	953.6		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: LCSD 880-83154/3-A
Matrix: Solid
Analysis Batch: 83278

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 83154

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	857.1		mg/Kg		86	70 - 130	20	20
Diesel Range Organics (Over C10-C28)			1000	792.4		mg/Kg		79	70 - 130	18	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-83204/1-A
Matrix: Solid
Analysis Batch: 83209

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/14/24 12:07	1

QC Sample Results

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-83204/2-A
Matrix: Solid
Analysis Batch: 83209

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	253.7		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-83204/3-A
Matrix: Solid
Analysis Batch: 83209

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	254.3		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

GC VOA

Prep Batch: 83122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Total/NA	Solid	5035	
880-44746-2	SW03	Total/NA	Solid	5035	
880-44746-3	SW05	Total/NA	Solid	5035	
880-44746-4	FS07	Total/NA	Solid	5035	
880-44746-5	FS08	Total/NA	Solid	5035	
MB 880-83122/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-83122/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-83122/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 83198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Total/NA	Solid	8021B	83122
880-44746-2	SW03	Total/NA	Solid	8021B	83122
880-44746-3	SW05	Total/NA	Solid	8021B	83122
880-44746-4	FS07	Total/NA	Solid	8021B	83122
880-44746-5	FS08	Total/NA	Solid	8021B	83122
MB 880-83122/5-A	Method Blank	Total/NA	Solid	8021B	83122
LCS 880-83122/1-A	Lab Control Sample	Total/NA	Solid	8021B	83122
LCSD 880-83122/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	83122

Analysis Batch: 83305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Total/NA	Solid	Total BTEX	
880-44746-2	SW03	Total/NA	Solid	Total BTEX	
880-44746-3	SW05	Total/NA	Solid	Total BTEX	
880-44746-4	FS07	Total/NA	Solid	Total BTEX	
880-44746-5	FS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 83154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Total/NA	Solid	8015NM Prep	
880-44746-2	SW03	Total/NA	Solid	8015NM Prep	
880-44746-3	SW05	Total/NA	Solid	8015NM Prep	
880-44746-4	FS07	Total/NA	Solid	8015NM Prep	
880-44746-5	FS08	Total/NA	Solid	8015NM Prep	
MB 880-83154/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-83154/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-83154/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 83278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Total/NA	Solid	8015B NM	83154
880-44746-2	SW03	Total/NA	Solid	8015B NM	83154
880-44746-3	SW05	Total/NA	Solid	8015B NM	83154
880-44746-4	FS07	Total/NA	Solid	8015B NM	83154
880-44746-5	FS08	Total/NA	Solid	8015B NM	83154
MB 880-83154/1-A	Method Blank	Total/NA	Solid	8015B NM	83154
LCS 880-83154/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	83154
LCSD 880-83154/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	83154

QC Association Summary

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

GC Semi VOA

Analysis Batch: 83508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Total/NA	Solid	8015 NM	
880-44746-2	SW03	Total/NA	Solid	8015 NM	
880-44746-3	SW05	Total/NA	Solid	8015 NM	
880-44746-4	FS07	Total/NA	Solid	8015 NM	
880-44746-5	FS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 83204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Soluble	Solid	DI Leach	
880-44746-2	SW03	Soluble	Solid	DI Leach	
880-44746-3	SW05	Soluble	Solid	DI Leach	
880-44746-4	FS07	Soluble	Solid	DI Leach	
880-44746-5	FS08	Soluble	Solid	DI Leach	
MB 880-83204/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-83204/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-83204/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 83209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-44746-1	SW02	Soluble	Solid	300.0	83204
880-44746-2	SW03	Soluble	Solid	300.0	83204
880-44746-3	SW05	Soluble	Solid	300.0	83204
880-44746-4	FS07	Soluble	Solid	300.0	83204
880-44746-5	FS08	Soluble	Solid	300.0	83204
MB 880-83204/1-A	Method Blank	Soluble	Solid	300.0	83204
LCS 880-83204/2-A	Lab Control Sample	Soluble	Solid	300.0	83204
LCSD 880-83204/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	83204

Lab Chronicle

Client: Ensolum
Job ID: 880-44746-1
Project/Site: Buck Federal CTB
SDG: Lea County, New Mexico

Client Sample ID: SW02
Lab Sample ID: 880-44746-1
Date Collected: 06/13/24 10:25
Matrix: Solid
Date Received: 06/13/24 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			83122	EL	EET MID	06/14/24 09:16
Total/NA	Analysis	8021B		1	83198	MNR	EET MID	06/14/24 14:05
Total/NA	Analysis	Total BTEX		1	83305	SM	EET MID	06/14/24 14:05
Total/NA	Analysis	8015 NM		1	83508	SM	EET MID	06/17/24 23:27
Total/NA	Prep	8015NM Prep			83154	EL	EET MID	06/13/24 16:25
Total/NA	Analysis	8015B NM		1	83278	SM	EET MID	06/17/24 23:27
Soluble	Leach	DI Leach			83204	SA	EET MID	06/14/24 08:29
Soluble	Analysis	300.0		1	83209	CH	EET MID	06/14/24 13:23

Client Sample ID: SW03
Lab Sample ID: 880-44746-2
Date Collected: 06/13/24 10:30
Matrix: Solid
Date Received: 06/13/24 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			83122	EL	EET MID	06/14/24 09:16
Total/NA	Analysis	8021B		1	83198	MNR	EET MID	06/14/24 17:13
Total/NA	Analysis	Total BTEX		1	83305	SM	EET MID	06/14/24 17:13
Total/NA	Analysis	8015 NM		1	83508	SM	EET MID	06/17/24 23:43
Total/NA	Prep	8015NM Prep			83154	EL	EET MID	06/13/24 16:25
Total/NA	Analysis	8015B NM		1	83278	SM	EET MID	06/17/24 23:43
Soluble	Leach	DI Leach			83204	SA	EET MID	06/14/24 08:29
Soluble	Analysis	300.0		1	83209	CH	EET MID	06/14/24 12:48

Client Sample ID: SW05
Lab Sample ID: 880-44746-3
Date Collected: 06/13/24 10:35
Matrix: Solid
Date Received: 06/13/24 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			83122	EL	EET MID	06/14/24 09:16
Total/NA	Analysis	8021B		1	83198	MNR	EET MID	06/14/24 17:34
Total/NA	Analysis	Total BTEX		1	83305	SM	EET MID	06/14/24 17:34
Total/NA	Analysis	8015 NM		1	83508	SM	EET MID	06/17/24 23:59
Total/NA	Prep	8015NM Prep			83154	EL	EET MID	06/13/24 16:25
Total/NA	Analysis	8015B NM		1	83278	SM	EET MID	06/17/24 23:59
Soluble	Leach	DI Leach			83204	SA	EET MID	06/14/24 08:29
Soluble	Analysis	300.0		1	83209	CH	EET MID	06/14/24 12:53

Client Sample ID: FS07
Lab Sample ID: 880-44746-4
Date Collected: 06/13/24 10:40
Matrix: Solid
Date Received: 06/13/24 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			83122	EL	EET MID	06/14/24 09:16
Total/NA	Analysis	8021B		1	83198	MNR	EET MID	06/14/24 17:54
Total/NA	Analysis	Total BTEX		1	83305	SM	EET MID	06/14/24 17:54

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Client Sample ID: FS07

Lab Sample ID: 880-44746-4
Matrix: Solid
Date Collected: 06/13/24 10:40
Date Received: 06/13/24 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	83508	SM	EET MID	06/18/24 00:17
Total/NA	Prep	8015NM Prep			83154	EL	EET MID	06/13/24 16:25
Total/NA	Analysis	8015B NM		1	83278	SM	EET MID	06/18/24 00:17
Soluble	Leach	DI Leach			83204	SA	EET MID	06/14/24 08:29
Soluble	Analysis	300.0		1	83209	CH	EET MID	06/14/24 13:08

Client Sample ID: FS08

Lab Sample ID: 880-44746-5
Matrix: Solid
Date Collected: 06/13/24 10:45
Date Received: 06/13/24 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			83122	EL	EET MID	06/14/24 09:16
Total/NA	Analysis	8021B		1	83198	MNR	EET MID	06/14/24 18:15
Total/NA	Analysis	Total BTEX		1	83305	SM	EET MID	06/14/24 18:15
Total/NA	Analysis	8015 NM		1	83508	SM	EET MID	06/18/24 01:06
Total/NA	Prep	8015NM Prep			83154	EL	EET MID	06/13/24 16:25
Total/NA	Analysis	8015B NM		1	83278	SM	EET MID	06/18/24 01:06
Soluble	Leach	DI Leach			83204	SA	EET MID	06/14/24 08:29
Soluble	Analysis	300.0		1	83209	CH	EET MID	06/14/24 13:13

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Job ID: 880-44746-1
Project/Site: Buck Federal CTB
SDG: Lea County, New Mexico

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: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

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: Buck Federal CTB

Job ID: 880-44746-1
SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-44746-1	SW02	Solid	06/13/24 10:25	06/13/24 14:50	0-4'
880-44746-2	SW03	Solid	06/13/24 10:30	06/13/24 14:50	0-4'
880-44746-3	SW05	Solid	06/13/24 10:35	06/13/24 14:50	0-4'
880-44746-4	FS07	Solid	06/13/24 10:40	06/13/24 14:50	4'
880-44746-5	FS08	Solid	06/13/24 10:45	06/13/24 14:50	4'

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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 880-44746 Chain of Custody

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum, LLC	Company Name:	
Address:	601 N Marienfeld St Suite 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:	Buck Federal CTB	Turn Around	☒ Routine ☐ Rush
Project Number:	03D2024199	Due Date:	
Project Location:	Lea County, New Mexico	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Noah Duker		
PO #:	03D2024199		

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	LK5	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-.1	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.1	
Total Containers:		Corrected Temperature:	3.0	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	TPH 8015	BTEX 8021	Chlorides 300
SW02	S	6/13/2024	1025	0-4'	C	1	X	X	X
SW03	S	6/13/2024	1030	0-4'	C	1	X	X	X
SW05	S	6/13/2024	1035	0-4'	C	1	X	X	X
FS07	S	6/13/2024	1040	4'	C	1	X	X	X
FS08	S	6/13/2024	1045	4'	C	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		6/13/24 1450	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-44746-1
SDG Number: Lea County, New Mexico

Login Number: 44746
List Number: 1
Creator: Rodriguez, Leticia

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	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 359853

QUESTIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 359853
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2315731307**
Incident Name	**NAPP2315731307 BUCK FEDERAL CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fAPP2212245796] BUCK FEDERAL 17 BATTERY**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BUCK FEDERAL CTB
Date Release Discovered	06/01/2023
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil 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	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	Cause: | | Other (Specify) | Released: 0 (Unknown Released Amount) | Recovered: 0 | Lost: 0 .
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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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 359853
	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)	**More info needed to determine if this will be treated as a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	*Unavailable.*
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	False
The impacted area has been secured to protect human health and the environment	False
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	False
All free liquids and recoverable materials have been removed and managed appropriately	False
If all the actions described above have not been undertaken, explain why	N/A
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: 07/01/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
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1000 Rio Brazos Rd., Aztec, NM 87410
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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 359853
	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 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
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 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 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 1 and 5 (mi.)
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	Medium
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	5670
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	24100
GRO+DRO (EPA SW-846 Method 8015M)	24040
BTEX (EPA SW-846 Method 8021B or 8260B)	49.4
Benzene (EPA SW-846 Method 8021B or 8260B)	0.6
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	06/07/2024
On what date will (or did) the final sampling or liner inspection occur	06/13/2024
On what date will (or was) the remediation complete(d)	06/13/2024
What is the estimated surface area (in square feet) that will be reclaimed	377
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	1362
What is the estimated volume (in cubic yards) that will be remediated	200
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: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 359853
	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	LEA LAND LANDFILL [fEEM0112342028]
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	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
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: 07/01/2024
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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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 359853
	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

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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 359853
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**352926**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**06/13/2024**
What was the (estimated) number of samples that were to be gathered	**5**
What was the sampling surface area in square feet	**1934**

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	1362
What was the total volume (cubic yards) remediated	200
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	377
What was the total volume (in cubic yards) reclaimed	133
Summarize any additional remediation activities not included by answers (above)	na

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: 07/01/2024

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QUESTIONS (continued)

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	Action Number: 359853
	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 359853

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 359853
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	7/15/2024
scott.rodgers	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	7/15/2024