ENSOLUM

June 27, 2022

District 1
New Mexico Oil Conservation Division
1625 N. French Dr.
Hobbs, New Mexico 88240

Re: Closure Request Addendum
Battle Axe Federal Com 002H
Incident Number NAPP2134740531
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of ConocoPhillips Company (COP), has prepared the following addendum to the original Closure Request submitted on May 23, 2022. This addendum provides an update to the excavation and soil sampling activities completed at the Battle Axe Federal Com 002H (Site), in response to the denial of the Closure Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD requested that COP conduct additional investigation of depth to groundwater or complete remediation acitivites to meet the most stringent Table 1 Closure Criteria. Based on the additional excavation and soil sampling activities described below, COP is requesting closure for Incident Number NAPP2134740531.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit E, Section 02, Township 26 South, Range 33 East, in Lea County, New Mexico (32.07377° N, 103.55109°W) and is associated with oil and gas exploration and production operations on New Mexico State Land.

On December 4, 2021, a hole formed in the heater fire tube due to corrosion and resulted in the release of approximately 1.4 barrels (bbls) of crude oil and 4.4 bbls of produced water onto the pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; however, there were no free-standing fluids to recover. COP reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on December 13, 2021. The release was assigned Incident Number NAPP2134740531.

The original Closure Request detailed site characterization according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) were applied:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

Closure was requested based on laboratory analytical results for the excavation and delineation soil samples indicating benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria.

On June 1, 2022, NMOCD denied Closure Request for Incident Number NAPP2134740531 for the following reason:

- *The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater. Please resubmit the revised Closure Report by July 1, 2022.*

ADDITIONAL EXCAVATION ACTIVITIES

To address the denial, Ensolum oversaw excavation activities on June 15, 2022 to remove additional soil from the release area around preliminary soil samples SS01, SS03, and SS04 and excavation floor sample FS02. To direct excavation activities, soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to a depth ranging from 1-foot to 1.75 feet bgs. Upon completion of excavation activities, 5-point composite samples FS02A and FS03 through FS05 were collected from the floor of the excavation.

The excavation 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 at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of 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.

The excavation extent and excavation soil sample locations are depicted on Figure 1. Photographic documentation was conducted during excavation activities and a photographic log is included in Appendix A.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for excavation floor samples FS02A, FS03, FS04, and FS05 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix B.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the December 4, 2021, release of crude oil and produced water. Laboratory analytical results for the excavation soil samples,

collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Additionally, as reported in the original Closure Request, the release was laterally delineated to the below the most stringent Table 1 Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation is required. COP respectfully requests closure for Incident Number NAPP2134740531. The Final C-141 is included in Appendix C.

If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or acole@ensolum.com.

Sincerely,
Ensolum, LLC

Kalei Jennings
Senior Scientist

Aimee Cole
Senior Managing Scientist

cc: Charles Beauvais, ConocoPhillips
New Mexico State Land Office

Appendices:

Figure 1	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	Final C-141
Appendix D	NMOCD Sampling Notification

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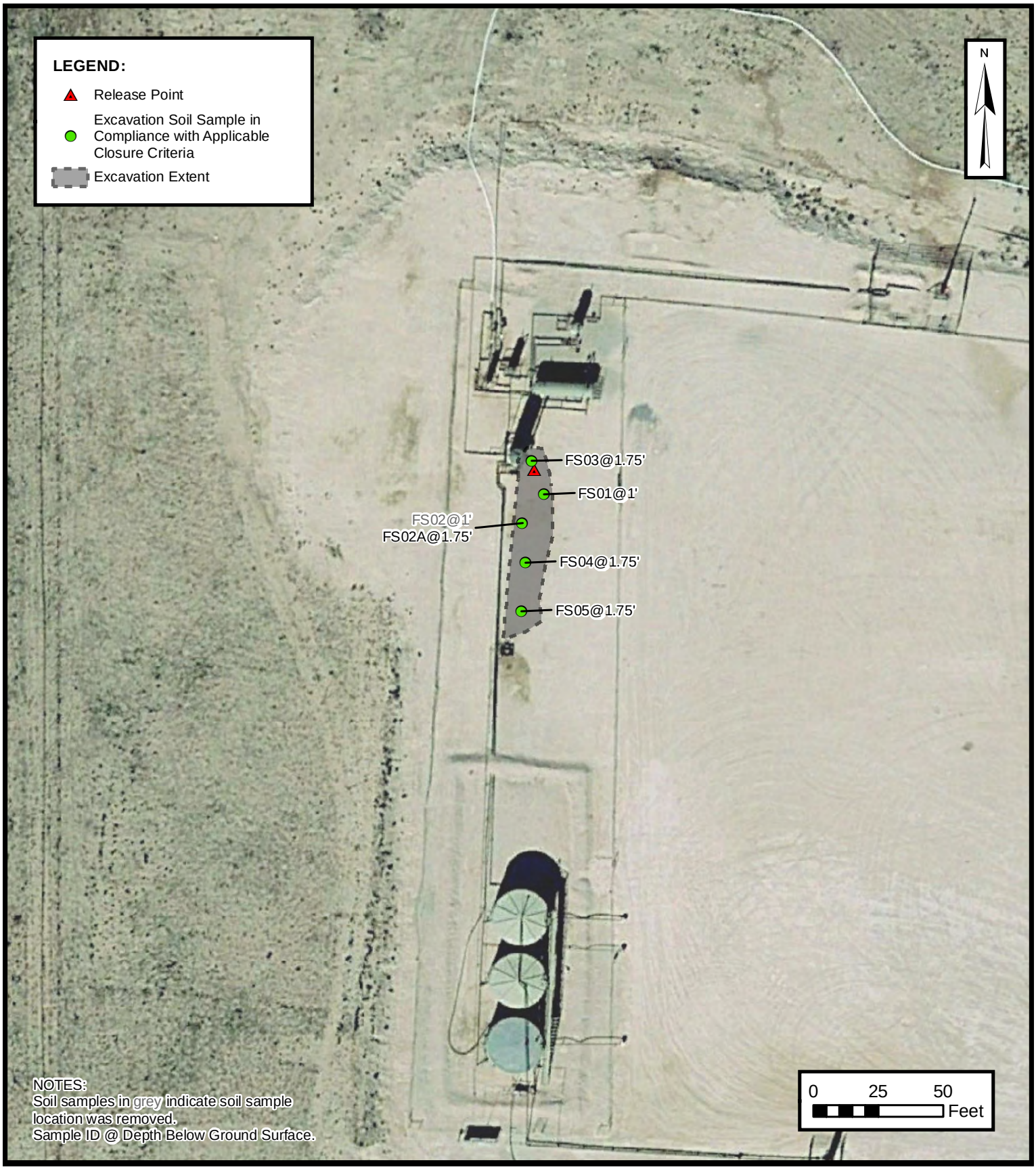
FIGURES



ENSOLUM
Environmental & Hydrogeologic Consultants

EXCAVATION SOIL SAMPLE LOCATIONS

CONOCOPHILLIPS COMPANY
BATTLE AXE FEDERAL COM 002H
NAPP2134740531
Unit E, Section 02, T26S, R33E
Lea County, New Mexico

FIGURE
1

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Battle Axe Federal Com 002H
ConocoPhillips Company
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Excavation Floor Soil Samples										
FS01	03/14/2022	1	<0.00201	<0.00402	<49.9	51.4	<49.9	51.4	51.4	91.9
FS02	03/14/2022	1	<0.00199	<0.00398	<49.9	318	<49.9	318	318	1,460
FS02A	06/15/2022	1.75	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	42.2
FS03	06/15/2022	1.75	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	91.5
FS04	06/15/2022	1.75	<0.00199	<0.00398	<49.8	57.3	<49.8	57.3	57.3	55.4
FS05	06/15/2022	1.75	<0.00199	<0.00398	<50.0	96.5	<50.0	96.5	96.5	74.8

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Grey text represents samples that have been excavated

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APPENDIX A

Photographic Log

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Photographic Log
ConocoPhillips Company
Battle Axe Federal Com 002H
Incident Number NAPP2134740531

Photograph 1
Date: June 15, 2022
Description: Location of excavation area prior to ground disturbance.

Photograph 2
Date: June 15, 2022
Description: Photo taken of final excavation extent.

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APPENDIX B

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-15968-1
Laboratory Sample Delivery Group: 03E2024013
Client Project/Site: Battle Axe Fed Com 2H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
6/23/2022 9:18:40 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Laboratory Job ID: 880-15968-1
SDG: 03E2024013

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-15968-1
Project/Site: Battle Axe Fed Com 2H SDG: 03E2024013

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
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: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Job ID: 880-15968-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-15968-1

Receipt
The samples were received on 6/16/2022 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-27720 and analytical batch 880-27643 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-27817 and analytical batch 880-28123 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Client Sample ID: FS02A

Lab Sample ID: 880-15968-1
Matrix: Solid
Date Collected: 06/15/22 11:45
Date Received: 06/16/22 10:40
Sample Depth: 1.25

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 17:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 17:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 17:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/20/22 16:31	06/21/22 17:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 17:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/20/22 16:31	06/21/22 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*06/20/22 16:31*	*06/21/22 17:50*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*06/20/22 16:31*	*06/21/22 17:50*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/22/22 12:44	1

Method: 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			06/17/22 08:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		06/16/22 15:34	06/17/22 04:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/16/22 15:34	06/17/22 04:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/16/22 15:34	06/17/22 04:59	1
Total TPH	<49.9	U	49.9		mg/Kg		06/16/22 15:34	06/17/22 04:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*06/16/22 15:34*	*06/17/22 04:59*	*1*
o-Terphenyl	*106*		*70 - 130*	*06/16/22 15:34*	*06/17/22 04:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42.2**		5.01		mg/Kg			06/23/22 07:25	1

Client Sample ID: FS03

Lab Sample ID: 880-15968-2
Matrix: Solid
Date Collected: 06/15/22 13:00
Date Received: 06/16/22 10:40
Sample Depth: 1.75

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 18:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 18:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 18:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/20/22 16:31	06/21/22 18:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 18:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/20/22 16:31	06/21/22 18:11	1

Client Sample Results

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Client Sample ID: FS03

Lab Sample ID: 880-15968-2

Date Collected: 06/15/22 13:00
Matrix: Solid
Date Received: 06/16/22 10:40
Sample Depth: 1.75

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*06/20/22 16:31*	*06/21/22 18:11*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/20/22 16:31*	*06/21/22 18:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			06/22/22 12:44	1

Method: 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			06/17/22 08:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		06/16/22 15:34	06/17/22 05:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/16/22 15:34	06/17/22 05:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/16/22 15:34	06/17/22 05:21	1
Total TPH	<49.9	U	49.9		mg/Kg		06/16/22 15:34	06/17/22 05:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*06/16/22 15:34*	*06/17/22 05:21*	*1*
o-Terphenyl	*109*		*70 - 130*	*06/16/22 15:34*	*06/17/22 05:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**91.5**		5.00		mg/Kg			06/22/22 10:32	1

Client Sample ID: FS04

Lab Sample ID: 880-15968-3

Date Collected: 06/15/22 13:04
Matrix: Solid
Date Received: 06/16/22 10:40
Sample Depth: 1.75

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/20/22 16:31	06/21/22 18:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/20/22 16:31	06/21/22 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/20/22 16:31*	*06/21/22 18:31*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*06/20/22 16:31*	*06/21/22 18:31*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/22/22 12:44	1

Client Sample Results

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Client Sample ID: FS04

Date Collected: 06/15/22 13:04
Date Received: 06/16/22 10:40
Sample Depth: 1.75

Lab Sample ID: 880-15968-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.3**		49.8		mg/Kg			06/17/22 08:55	1

Method: 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 *1	49.8		mg/Kg		06/16/22 15:34	06/17/22 05:43	1
Diesel Range Organics (Over C10-C28)	**57.3**		49.8		mg/Kg		06/16/22 15:34	06/17/22 05:43	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/16/22 15:34	06/17/22 05:43	1
Total TPH	**57.3**		49.8		mg/Kg		06/16/22 15:34	06/17/22 05:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*06/16/22 15:34*	*06/17/22 05:43*	*1*
o-Terphenyl	*120*		*70 - 130*	*06/16/22 15:34*	*06/17/22 05:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**55.4**		5.04		mg/Kg			06/22/22 10:56	1

Client Sample ID: FS05

Date Collected: 06/15/22 13:10
Date Received: 06/16/22 10:40
Sample Depth: 1.75

Lab Sample ID: 880-15968-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/20/22 16:31	06/21/22 18:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/20/22 16:31	06/21/22 18:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/20/22 16:31	06/21/22 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*06/20/22 16:31*	*06/21/22 18:52*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/20/22 16:31*	*06/21/22 18:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/22/22 12:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**96.5**		50.0		mg/Kg			06/17/22 08:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		06/16/22 15:34	06/17/22 06:04	1
Diesel Range Organics (Over C10-C28)	**96.5**		50.0		mg/Kg		06/16/22 15:34	06/17/22 06:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/16/22 15:34	06/17/22 06:04	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Client Sample ID: FS05

Date Collected: 06/15/22 13:10
Date Received: 06/16/22 10:40
Sample Depth: 1.75

Lab Sample ID: 880-15968-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	96.5		50.0		mg/Kg		06/16/22 15:34	06/17/22 06:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/16/22 15:34*	*06/17/22 06:04*	*1*
o-Terphenyl	*108*		*70 - 130*	*06/16/22 15:34*	*06/17/22 06:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74.8		5.05		mg/Kg			06/22/22 11:04	1

Surrogate Summary

Client: Ensolum

Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1

SDG: 03E2024013

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)
880-15967-A-1-D MS	Matrix Spike	117	95
880-15967-A-1-E MSD	Matrix Spike Duplicate	108	98
880-15968-1	FS02A	113	84
880-15968-2	FS03	114	96
880-15968-3	FS04	101	88
880-15968-4	FS05	111	95
LCS 880-27986/1-A	Lab Control Sample	109	99
LCSD 880-27986/2-A	Lab Control Sample Dup	109	98
MB 880-27986/5-A	Method Blank	101	90

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)
880-15961-A-21-B MS	Matrix Spike	91	92
880-15961-A-21-C MSD	Matrix Spike Duplicate	105	104
880-15968-1	FS02A	96	106
880-15968-2	FS03	99	109
880-15968-3	FS04	112	120
880-15968-4	FS05	97	108
LCS 880-27720/2-A	Lab Control Sample	99	109
LCSD 880-27720/3-A	Lab Control Sample Dup	107	117
MB 880-27720/1-A	Method Blank	97	109

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-27986/5-A
Matrix: Solid
Analysis Batch: 28004

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 27986

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 12:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 12:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 12:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/20/22 16:31	06/21/22 12:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/20/22 16:31	06/21/22 12:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/20/22 16:31	06/21/22 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/20/22 16:31*	*06/21/22 12:20*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*06/20/22 16:31*	*06/21/22 12:20*	*1*

Lab Sample ID: LCS 880-27986/1-A
Matrix: Solid
Analysis Batch: 28004

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 27986

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1056		mg/Kg		106	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1095		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2214		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1106		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-27986/2-A
Matrix: Solid
Analysis Batch: 28004

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 27986

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1081		mg/Kg		108	70 - 130	2	35
Toluene			0.100	0.1076		mg/Kg		108	70 - 130	4	35
Ethylbenzene			0.100	0.1125		mg/Kg		113	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2307		mg/Kg		115	70 - 130	4	35
o-Xylene			0.100	0.1162		mg/Kg		116	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

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

Lab Sample ID: MB 880-27720/1-A
Matrix: Solid
Analysis Batch: 27643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 27720

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		06/16/22 15:34	06/16/22 21:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/16/22 15:34	06/16/22 21:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/16/22 15:34	06/16/22 21:26	1
Total TPH	<50.0	U	50.0		mg/Kg		06/16/22 15:34	06/16/22 21:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/16/22 15:34*	*06/16/22 21:26*	*1*
o-Terphenyl	*109*		*70 - 130*	*06/16/22 15:34*	*06/16/22 21:26*	*1*

Lab Sample ID: LCS 880-27720/2-A
Matrix: Solid
Analysis Batch: 27643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 27720

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	871.6		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1033		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-27720/3-A
Matrix: Solid
Analysis Batch: 27643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 27720

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1162	*1	mg/Kg		116	70 - 130	29	20
Diesel Range Organics (Over C10-C28)			1000	1129		mg/Kg		113	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-27817/1-A
Matrix: Solid
Analysis Batch: 28123

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			06/23/22 03:16	1

QC Sample Results

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-27817/2-A
Matrix: Solid
Analysis Batch: 28123

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	264.7		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-27817/3-A
Matrix: Solid
Analysis Batch: 28123

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	264.6		mg/Kg		106	90 - 110	0	20

Lab Sample ID: MB 880-27818/1-A
Matrix: Solid
Analysis Batch: 28124

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			06/22/22 10:09	1

Lab Sample ID: LCS 880-27818/2-A
Matrix: Solid
Analysis Batch: 28124

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-27818/3-A
Matrix: Solid
Analysis Batch: 28124

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	259.4		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 880-15968-2 MS
Matrix: Solid
Analysis Batch: 28124

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	91.5		250	323.0		mg/Kg		93	90 - 110		

Lab Sample ID: 880-15968-2 MSD
Matrix: Solid
Analysis Batch: 28124

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	91.5		250	323.9		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

GC VOA

Prep Batch: 27986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Total/NA	Solid	5035	
880-15968-2	FS03	Total/NA	Solid	5035	
880-15968-3	FS04	Total/NA	Solid	5035	
880-15968-4	FS05	Total/NA	Solid	5035	
MB 880-27986/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-27986/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-27986/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 28004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Total/NA	Solid	8021B	27986
880-15968-2	FS03	Total/NA	Solid	8021B	27986
880-15968-3	FS04	Total/NA	Solid	8021B	27986
880-15968-4	FS05	Total/NA	Solid	8021B	27986
MB 880-27986/5-A	Method Blank	Total/NA	Solid	8021B	27986
LCS 880-27986/1-A	Lab Control Sample	Total/NA	Solid	8021B	27986
LCSD 880-27986/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	27986

Analysis Batch: 28149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Total/NA	Solid	Total BTEX	
880-15968-2	FS03	Total/NA	Solid	Total BTEX	
880-15968-3	FS04	Total/NA	Solid	Total BTEX	
880-15968-4	FS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 27643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Total/NA	Solid	8015B NM	27720
880-15968-2	FS03	Total/NA	Solid	8015B NM	27720
880-15968-3	FS04	Total/NA	Solid	8015B NM	27720
880-15968-4	FS05	Total/NA	Solid	8015B NM	27720
MB 880-27720/1-A	Method Blank	Total/NA	Solid	8015B NM	27720
LCS 880-27720/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	27720
LCSD 880-27720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	27720

Prep Batch: 27720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Total/NA	Solid	8015NM Prep	
880-15968-2	FS03	Total/NA	Solid	8015NM Prep	
880-15968-3	FS04	Total/NA	Solid	8015NM Prep	
880-15968-4	FS05	Total/NA	Solid	8015NM Prep	
MB 880-27720/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-27720/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-27720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 27755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Total/NA	Solid	8015 NM	
880-15968-2	FS03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

GC Semi VOA (Continued)

Analysis Batch: 27755 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-3	FS04	Total/NA	Solid	8015 NM	
880-15968-4	FS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 27817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Soluble	Solid	DI Leach	
MB 880-27817/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27817/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27817/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 27818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-2	FS03	Soluble	Solid	DI Leach	
880-15968-3	FS04	Soluble	Solid	DI Leach	
880-15968-4	FS05	Soluble	Solid	DI Leach	
MB 880-27818/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27818/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27818/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-15968-2 MS	FS03	Soluble	Solid	DI Leach	
880-15968-2 MSD	FS03	Soluble	Solid	DI Leach	

Analysis Batch: 28123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-1	FS02A	Soluble	Solid	300.0	27817
MB 880-27817/1-A	Method Blank	Soluble	Solid	300.0	27817
LCS 880-27817/2-A	Lab Control Sample	Soluble	Solid	300.0	27817
LCSD 880-27817/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27817

Analysis Batch: 28124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15968-2	FS03	Soluble	Solid	300.0	27818
880-15968-3	FS04	Soluble	Solid	300.0	27818
880-15968-4	FS05	Soluble	Solid	300.0	27818
MB 880-27818/1-A	Method Blank	Soluble	Solid	300.0	27818
LCS 880-27818/2-A	Lab Control Sample	Soluble	Solid	300.0	27818
LCSD 880-27818/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27818
880-15968-2 MS	FS03	Soluble	Solid	300.0	27818
880-15968-2 MSD	FS03	Soluble	Solid	300.0	27818

Lab Chronicle

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Client Sample ID: FS02A
Date Collected: 06/15/22 11:45
Date Received: 06/16/22 10:40

Lab Sample ID: 880-15968-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			27986	06/20/22 16:31	MR	XEN MID
Total/NA	Analysis	8021B		1	28004	06/21/22 17:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28149	06/22/22 12:44	SM	XEN MID
Total/NA	Analysis	8015 NM		1	27755	06/17/22 08:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			27720	06/16/22 15:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	27643	06/17/22 04:59	AJ	XEN MID
Soluble	Leach	DI Leach			27817	06/17/22 12:13	SC	XEN MID
Soluble	Analysis	300.0		1	28123	06/23/22 07:25	CH	XEN MID

Client Sample ID: FS03
Date Collected: 06/15/22 13:00
Date Received: 06/16/22 10:40

Lab Sample ID: 880-15968-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			27986	06/20/22 16:31	MR	XEN MID
Total/NA	Analysis	8021B		1	28004	06/21/22 18:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28149	06/22/22 12:44	SM	XEN MID
Total/NA	Analysis	8015 NM		1	27755	06/17/22 08:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			27720	06/16/22 15:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	27643	06/17/22 05:21	AJ	XEN MID
Soluble	Leach	DI Leach			27818	06/17/22 12:15	SC	XEN MID
Soluble	Analysis	300.0		1	28124	06/22/22 10:32	CH	XEN MID

Client Sample ID: FS04
Date Collected: 06/15/22 13:04
Date Received: 06/16/22 10:40

Lab Sample ID: 880-15968-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			27986	06/20/22 16:31	MR	XEN MID
Total/NA	Analysis	8021B		1	28004	06/21/22 18:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28149	06/22/22 12:44	SM	XEN MID
Total/NA	Analysis	8015 NM		1	27755	06/17/22 08:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			27720	06/16/22 15:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	27643	06/17/22 05:43	AJ	XEN MID
Soluble	Leach	DI Leach			27818	06/17/22 12:15	SC	XEN MID
Soluble	Analysis	300.0		1	28124	06/22/22 10:56	CH	XEN MID

Client Sample ID: FS05
Date Collected: 06/15/22 13:10
Date Received: 06/16/22 10:40

Lab Sample ID: 880-15968-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			27986	06/20/22 16:31	MR	XEN MID
Total/NA	Analysis	8021B		1	28004	06/21/22 18:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28149	06/22/22 12:44	SM	XEN MID

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Client Sample ID: FS05

Date Collected: 06/15/22 13:10
Date Received: 06/16/22 10:40

Lab Sample ID: 880-15968-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	27755	06/17/22 08:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			27720	06/16/22 15:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	27643	06/17/22 06:04	AJ	XEN MID
Soluble	Leach	DI Leach			27818	06/17/22 12:15	SC	XEN MID
Soluble	Analysis	300.0		1	28124	06/22/22 11:04	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

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	T104704400-21-22	06-30-22

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: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Battle Axe Fed Com 2H

Job ID: 880-15968-1
SDG: 03E2024013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-15968-1	FS02A	Solid	06/15/22 11:45	06/16/22 10:40	1.25
880-15968-2	FS03	Solid	06/15/22 13:00	06/16/22 10:40	1.75
880-15968-3	FS04	Solid	06/15/22 13:04	06/16/22 10:40	1.75
880-15968-4	FS05	Solid	06/15/22 13:10	06/16/22 10:40	1.75

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: 159168

www.xenco.com Page 1 of 1

Project Manager	KALEI JENNINGS	Bill to (if different)	KALEI JENNINGS
Company Name	ENSOLUM, LLC	Company Name	ENSOLUM
Address	601 N MARIENFIELD ST	Address.	[redacted]
City, State ZIP.	MIDLAND, TX 79701	City, State ZIP	[redacted]
Phone.	817-683-2503	Email	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.	BATTLE AXE FED COM 2H	Turn Around	
Project Number:	03D2024013	☑ Routine ☐ Rush	
Project Location		Due Date:	
Sampler's Name.	HADLIE GREEN	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.	IR8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-.2
Sample Custody Seals.	Yes No (N/A)	Temperature Reading	.3
Total Containers:		Corrected Temperature	.1

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS02A	SC	6-15-22	1145	1.25		1	x	x	x
FS03			1300	1.75					
FS04			1304	1.75					
FS05			1310	1.75					

880-15968 Chain of Custody

Sample Comments

Incident ID
Cost Center:
AFE

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 Hadlie Green		6/16/22 10:40	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-15968-1
SDG Number: 03E2024013

Login Number: 15968
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	

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APPENDIX C

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	NAPP2134740531
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		

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2134740531
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: Ramona Marcus Date: 12/14/2021

L48 Spill Volume Estimate Form

NAPP2134740531

Lease/Well/Facility Name:	Battleaxe Fed Com 2
Asset Area:	DBEN
Release Discovery Date & Time:	12/4/2021
Release Type:	Oil Mixture
Provide any known details about the event:	Heater fire tube popped a hole

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	35.0	15.0	3.00	4	525.000	0.063	5.841	0.003	5.859	25.00%	1.465	4.394
Rectangle B					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
								Total Volume Release:	5.859		1.465	4.394

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2134740531
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2134740531
District RP	
Facility ID	
Application ID	

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

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 06/27/2022

email: Charles.R.Beauvais@conocophillips.com Telephone: (575) 988-2043

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2134740531
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 06/27/2022

email: Charles.R.Beauvais@conocophilips.com Telephone: 575) 988-2043

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Jennifer Nobui Date: 07/08/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ENSOLUM

APPENDIX D

NMOCD Sampling Notifications

From: Kalei Jennings
To: ocd.enviro@state.nm.us
Subject: Sampling Notification (Week of 06/13/22-06/17/22)
Date: Wednesday, June 8, 2022 5:10:00 PM
Attachments: image001.png
image002.png
image003.png
image004.png

All,

COP plans to complete final sampling activities at the following sites the week of June 13, 2022.

Monday

- Columbus Fed 021 & 022H CTB / NAPP2203830124

Tuesday

- Battle Axe Federal Com 002H / NAPP2134740531
- Broadcaster 29 Federal 3H / NAPP2201938653 & NAPP2132773092
- Super Cobra State Com #001H / NAPP2211531225
- Raspberry State Com 001H / NAPP2213029810

Wednesday

- Raspberry State Com 001H / NAPP2213029810
- Jaguar 18 State Com 002H & 003H / NAPP2213643210
-

Thursday

Friday

Thank you,

Kalei Jennings
Senior Scientist
817-683-2503
Ensolum, LLC

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

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

CONDITIONS

Action 120983

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 120983
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	7/8/2022