ENSOLUM

May 18, 2023

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Jazzmaster 17 State 003H
Incident Number nAPP2306543550
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Jazzmaster 17 State 003H (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil following a release of crude oil and produced water within lined containment and overspray onto the surrounding pasture area at the Site. Based on field observations, excavation activities, and soil sample laboratory analytical results, COG is submitting this *Closure Request*, describing Site assessment and excavation activities that have occurred and requesting no further action and closure for Incident Number nAPP2306543550.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit B, Section 17, Township 23 South, Range 33 East, in Lea County, New Mexico (32.3111°, -103.5922°) and is associated with oil and gas exploration and production operations on New Mexico State Land.

On February 21, 2023, a gasket failure resulted in the release of approximately 7.1 barrels (bbls) of crude oil and 7.1 bbls of produced water into lined secondary containment and overspray onto the surrounding pasture area. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 4.2 bbls of crude oil and 4.2 bbls of produced water were recovered. COG reported the release immediately via email to the New Mexico Oil Conservation Division (NMOCD) and submitted a *Release Notification Form C-141* (Form C-141) on March 6, 2023. The release was assigned Incident Number nAPP2306543550.

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 page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321746103352301, located approximately 1-mile south of the Site. The groundwater well has a reported depth to groundwater of 470.5 feet bgs and a total depth of 550 feet bgs. Ground surface elevation at the groundwater well location is 3,699 feet above mean sea level (amsl), which is approximately 7 feet lower in elevation than the Site. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a riverine, located approximately 2,440 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

A reclamation standard of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On March 1, 2023, Ensolum personnel were at the Site to complete preliminary assessment activities based on visible staining in the overspray pasture area and information provided by the C-141. Soil samples SS01 through SS04 were collected around the overspray pasture release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release. Soil samples SS05 through SS12 were collected within the overspray area at a depth of 0.5 feet bgs to assess the surficial soil within the release extent. Soil from the assessment samples was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted at the Site. A photographic log is included as 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 (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 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 soil samples SS05 through SS11, collected at 0.5 feet bgs and within the pasture overspray extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. Laboratory analytical results for soil sample SS12, collected at 0.5 feet bgs and within the pasture overspray extent, indicated chloride concentrations exceeded the reclamation requirement. Based on visible staining and laboratory analytical results for soil sample SS12, excavation activities were warranted.

LINER INTEGRITY INSPECTION ACTIVITIES

A 48-hour advance notice of the liner inspection was provided via email to the NMOCD District I office on March 15, 2023. A liner integrity inspection was conducted by Ensolum personnel on March 20, 2023, to confirm that the liner was operating as designed. The liner was visually inspected and no rips, holes, or damage to the liner was observed. The liner was determined to be in good working condition. Photographic documentation was conducted at the Site. A photographic log is included as Appendix B.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On April 27, 2023, Ensolum personnel returned to the Site to oversee excavation activities based on visible staining in the pasture overspray area and laboratory analytical results for soil sample SS12. Excavation activities were performed using a backhoe, hand shoveling, and transport vehicles. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to a depth of 1-foot bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of stained soil, 5-point composite soil samples were collected every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Due to the shallow depth of the excavation, the sidewalls were incorporated into the floor samples. Composite soil samples FS01 through FS05 were collected from the floor of the excavation at a depth of 1-foot bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for excavation soil samples FS01 through FS05 indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix C.

The excavation area measured approximately 970 square feet. A total of 36 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico. The excavation will be backfilled with locally sourced topsoil and contoured to match the surrounding grade. The disturbed pasture area will be seeded with an approved seed mix.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the February 21, 2023, crude oil and produced water release within lined containment and overspray onto the surrounding pasture. Upon inspection, the liner was determined to be sufficient. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant

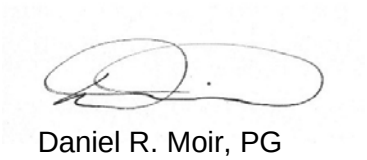
with the Site Closure Criteria and reclamation requirement. Based on the soil sample analytical results, no further remediation was required.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. COG believes these remedial actions are protective of human health, the environment, and groundwater. As such, COG respectfully requests closure for Incident Number nAPP2306543550.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist



Daniel R. Moir, PG
Senior Managing Geologist

cc: Jacob Laird, COG Operating, LLC
New Mexico State Land Office

Appendices:

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

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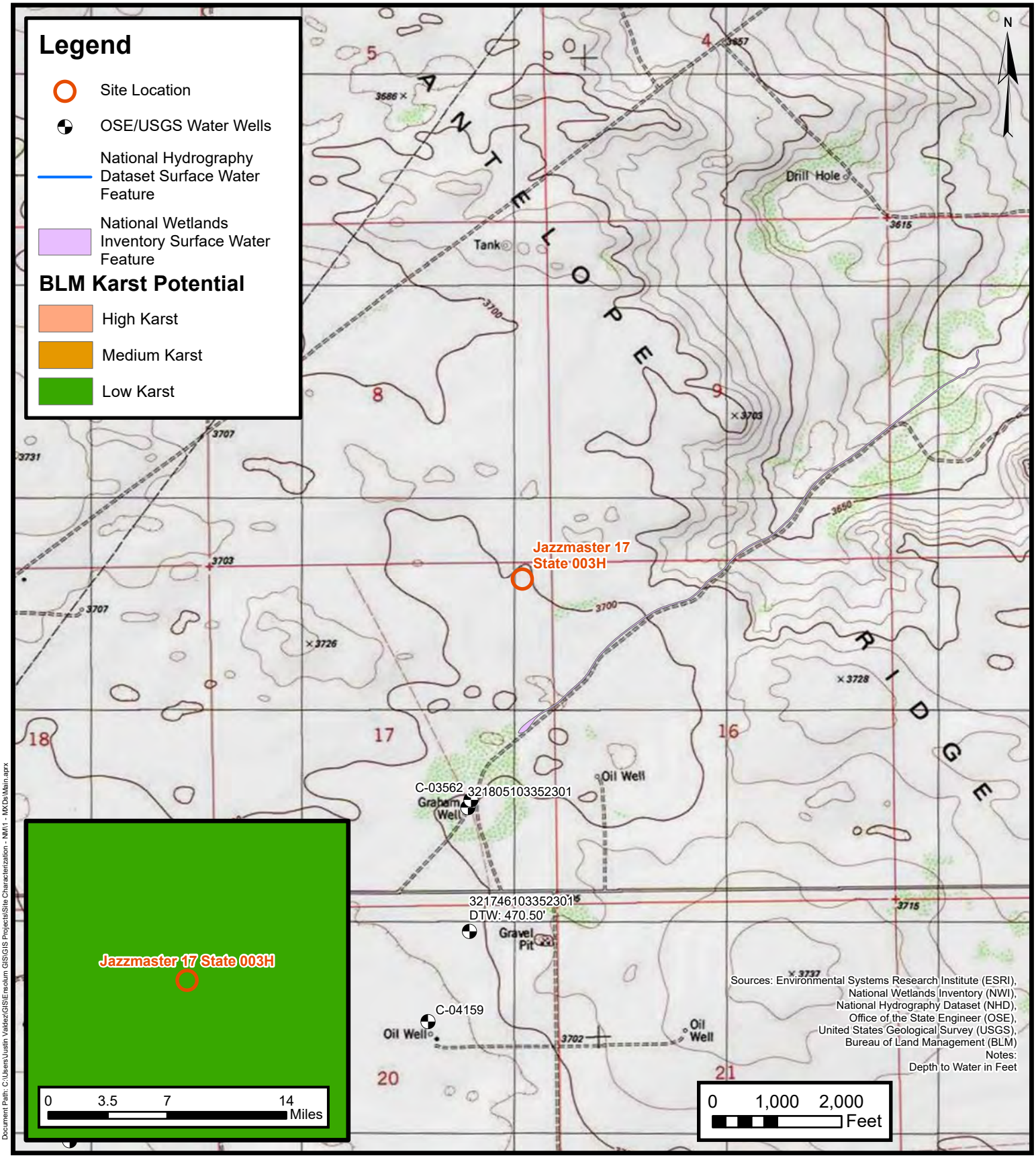
FIGURES



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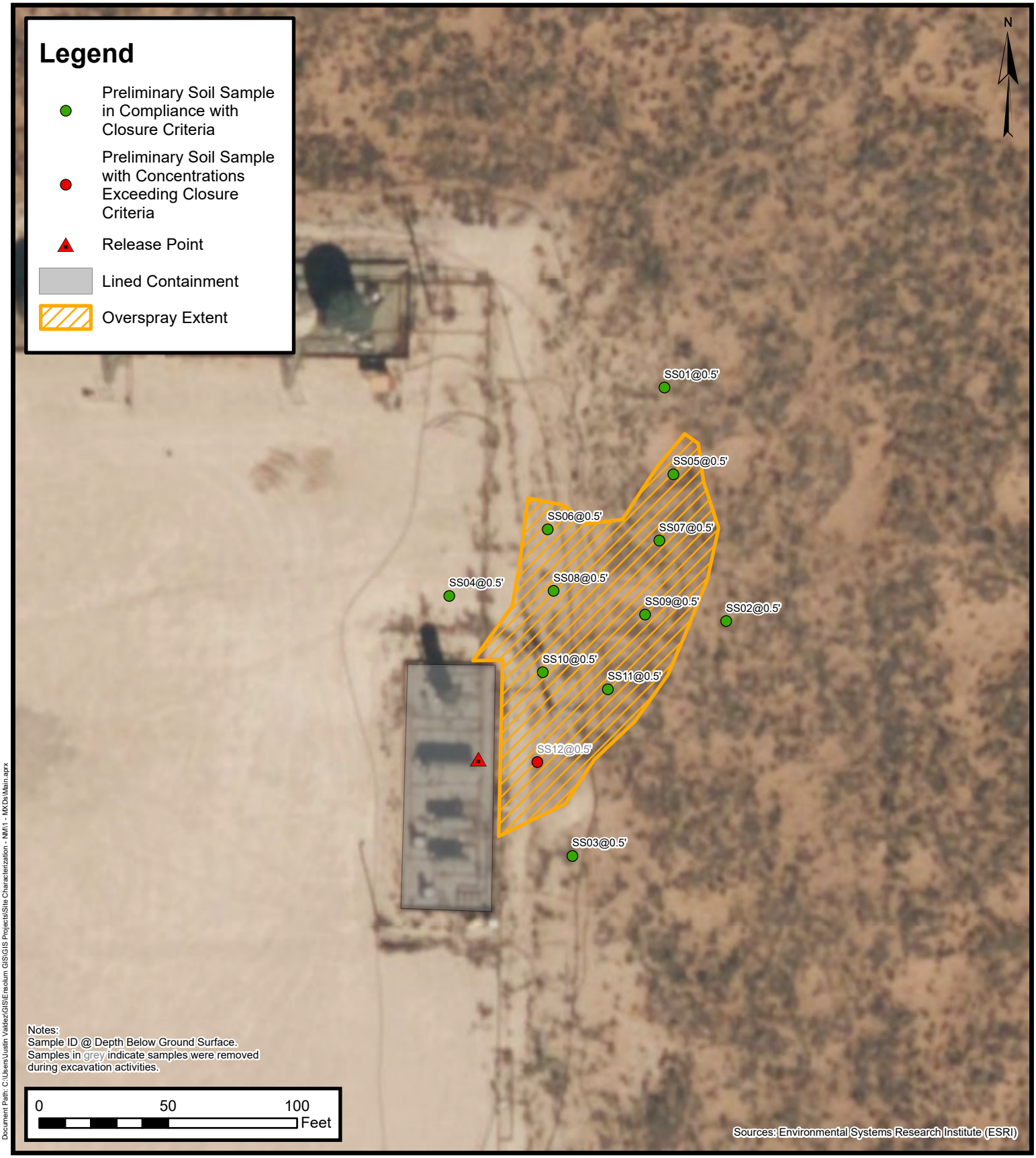
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Jazzmaster 17 State 003H
Incident Number: nAPP2306543550
Unit B, Sec 17, T23S, R33E
Lea County, New Mexico

FIGURE
1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\GIS Projects\Site Characterization - NM\1 - MXDs\Main.aprx

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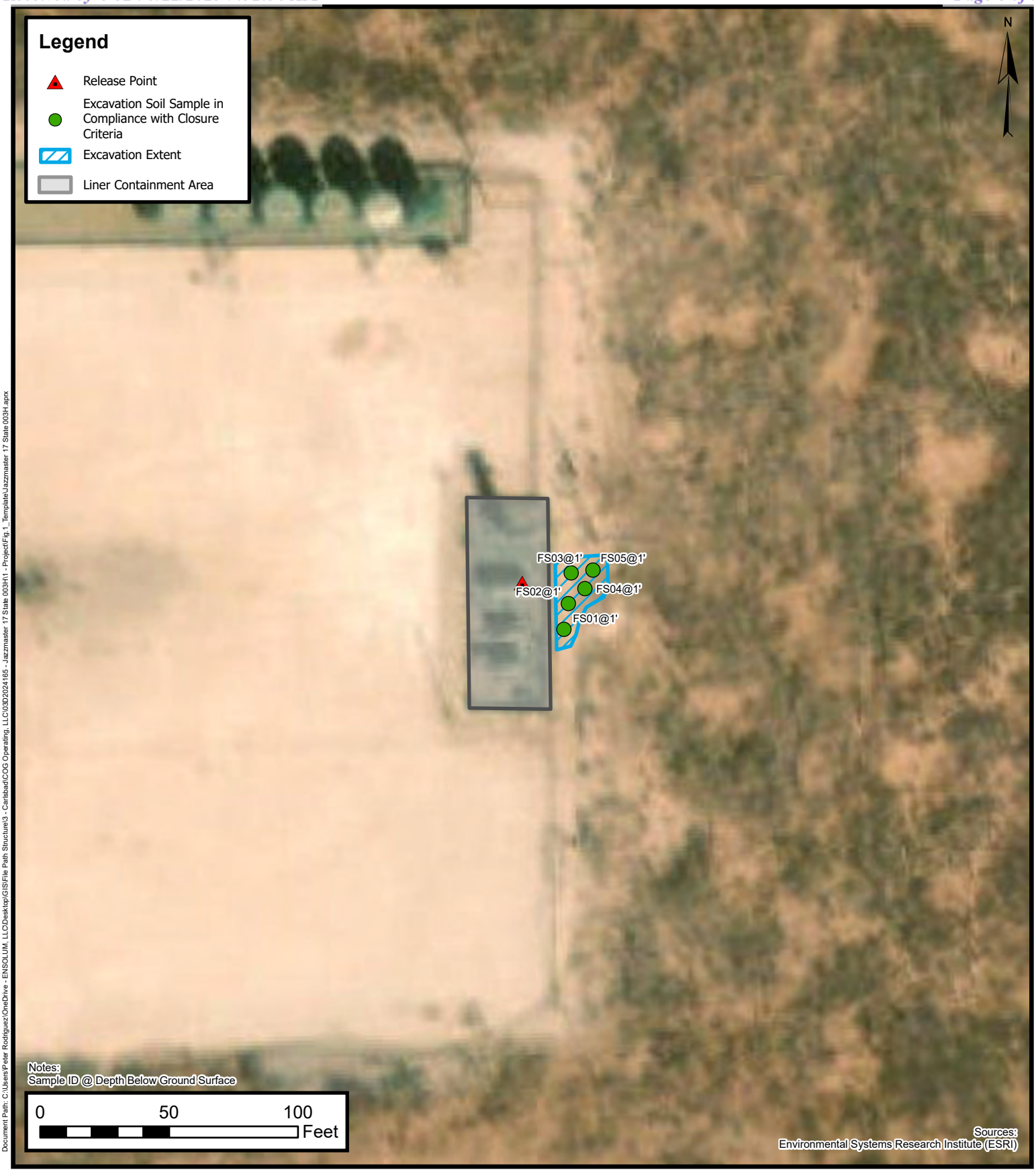
Preliminary Soil Sample Locations

COG Operating, LLC
Jazzmaster 17 State 003H
Incident Number: nAPP2306543550
Unit B, Sec 17, T23S, R33E
Lea County, New Mexico

FIGURE
2



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Excavation Soil Sample Locations

COG Operating, LLC

Jazzmaster 17 State 003H

Incident Number: NAPP2306543550

Unit B, Sec. 17, T263, R33E
Lea County, New Mexico

FIGURE

3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Jazzmaster 17 State 003H
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Preliminary Assessment Soil Samples										
SS01	03/01/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	51.3
SS02	03/01/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	50.7
SS03	03/01/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	46.2
SS04	03/01/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	69.1
SS05	03/01/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	48.0
SS06	03/01/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	62.1
SS07	03/01/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	61.6
SS08	03/01/2023	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	49.9
SS09	03/01/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	54.8
SS10	03/01/2023	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	55.6
SS11	03/01/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	61.3
SS12	03/01/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	5,590
Excavation Floor Soil Samples										
FS01	04/27/2023	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	72.8
FS02	04/27/2023	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	66.1
FS03	04/27/2023	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	69.1
FS04	04/27/2023	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	64.3
FS05	04/27/2023	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	65.0

Notes:

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

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APPENDIX A

Referenced Well Records

USGS 321746103352301 23S.23E.17.42331

Lea County, New Mexico
Latitude 32°17'46", Longitude 103°35'23" NAD27
Land-surface elevation 3,699 feet above NAVD88
The depth of the well is 550 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

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

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1972-09-21		D	62610		3192.86	NGVD29	1	Z			A
1972-09-21		D	62611		3194.60	NAVD88	1	Z			A
1972-09-21		D	72019	504.40			1	Z			A
1976-12-08		D	62610		3226.76	NGVD29	1	Z			A
1976-12-08		D	62611		3228.50	NAVD88	1	Z			A
1976-12-08		D	72019	470.50			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

2012 NOV 21 A 10: 14

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER): C-03582	OSE FILE NUMBER(S): C03582
WELL OWNER NAME(S): Bill Angel	PHONE (OPTIONAL): 575-369-6303
WELL OWNER MAILING ADDRESS: PO Box 190	CITY: Lovington STATE: nm ZIP: 88260

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	18	34.2	N
LONGITUDE	103	32	57.0	W

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

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼		☐ NORTH ☐ SOUTH	☐ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1682	John Norris	Hungry Horse LLC

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10-1-12	10-18-12	590	590	

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☒ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: ☐ AIR ☒ MUD ☐ ADDITIVES – SPECIFY:

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

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
0	590	12"	PVC	glued	6"	3/8	7/8

4. WATER-BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)
18	65	47	Sand	UK
95	110	15	Sand	UK
230	236	6	Sand	UK
383	391	8	Sand	UK
410	416	6	Sand	UK

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: N/A

TOTAL ESTIMATED WELL YIELD (GPM):

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	C-3582	POD NUMBER		TRN NUMBER	515767
LOCATION	5 T R	23S. 33E. 14.114			PAGE 1 OF 2

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ TURBINE ☐ JET ☐ CYLINDER ☐ NO PUMP – WELL NOT EQUIPPED ☐ OTHER – SPECIFY: Unknown

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	0	20	12	grout/cement	8	top

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
0	7	7	topsoil	☐ YES ☒ NO
7	18	11	caliche	☐ YES ☒ NO
18	65	47	Sand	☒ YES ☐ NO
65	80	15	ROCK	☐ YES ☒ NO
80	95	15	Red clay	☒ YES ☐ NO
95	110	15	Sand	☒ YES ☐ NO
110	230	120	Red clay	☒ YES ☐ NO
230	236	6	Sand	☒ YES ☐ NO
236	310	74	Red clay	☒ YES ☐ NO
310	362	52	Sand clay	☒ YES ☐ NO
362	383	21	Red clay	☒ YES ☐ NO
383	391	8	Sand	☒ YES ☐ NO
391	410	19	Red clay	☒ YES ☐ NO
410	416	6	Sand	☒ YES ☐ NO
416	513	97	Red clay	☒ YES ☐ NO
513	520	104	Sand	☒ YES ☐ NO
520	590	70	Red clay	☒ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO.

WELL TEST — METHOD: ☐ BAILER ☐ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY: N/A

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

ADDITIONAL STATEMENTS OR EXPLANATIONS:

STATE ENGINEER OFFICE ROSWELL
2012 NOV 21 A 10:

8. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

[signature] SIGNATURE OF DRILLER   11-19-12 DATE

FOR OSE INTERNAL USE   WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER C-3582	POD NUMBER 1	TRN NUMBER 515167
LOCATION STK	23S.33E.14.114	PAGE 2 OF 2

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APPENDIX B

Photographic Log

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Photographic Log
COG Operating, LLC
Jazzmaster 17 State 003H
Incident Number nAPP2306543550

Photograph: 1 Date: 2/21/2023
Description: Soil staining in release footprint
View: Northwest

Photograph: 2 Date: 2/21/2023
Description: Soil staining in release footprint
View: East

Photograph: 3 Date: 3/1/2023
Description: Initial assessment activities
View: South

Photograph: 4 Date: 3/20/2023
Description: View of lined containment deemed to be in good condition.

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Photographic Log
COG Operating, LLC
Jazzmaster 17 State 003H
Incident Number nAPP2306543550

Photograph: 5 Date: 3/20/2023
Description: View of lined containment deemed to be in good condition.

Photograph: 6 Date: 4/27/2023
Description: Excavation activities
View: East

Photograph: 7 Date: 4/27/2023
Description: Excavation activities
View: North

Photograph: 8 Date: 4/27/2023
Description: Excavation activities
View: South

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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 3/14/2023 5:43:26 PM

JOB DESCRIPTION

Jazzmaster 17 ST 3H
SDG NUMBER 03D2024165

JOB NUMBER

890-4218-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

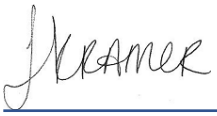
See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

Authorization



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3/14/2023 5:43:26 PM

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

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Laboratory Job ID: 890-4218-1
SDG: 03D2024165

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Definitions/Glossary

Client: Ensolum Job ID: 890-4218-1
Project/Site: Jazzmaster 17 ST 3H SDG: 03D2024165

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
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: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Job ID: 890-4218-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4218-1

Receipt
The samples were received on 3/1/2023 3:37 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4218-1), SS02 (890-4218-2), SS03 (890-4218-3), SS04 (890-4218-4), SS05 (890-4218-5), SS06 (890-4218-6), SS07 (890-4218-7), SS08 (890-4218-8), SS09 (890-4218-9), SS10 (890-4218-10), SS11 (890-4218-11) and SS12 (890-4218-12).

GC VOA
Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-48331 and analytical batch 880-48569 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-47811 and analytical batch 880-47830 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-47814 and analytical batch 880-47828 was outside the upper control limits.

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

HPLC/IC
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: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS01

Date Collected: 03/01/23 11:50
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:59	1
Toluene	<0.00200	U F1	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:59	1
Ethylbenzene	<0.00200	U F1	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:59	1
m-Xylene & p-Xylene	<0.00401	U F1	0.00401		mg/Kg		03/10/23 14:41	03/14/23 11:59	1
o-Xylene	<0.00200	U F1	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:59	1
Xylenes, Total	<0.00401	U F1	0.00401		mg/Kg		03/10/23 14:41	03/14/23 11:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*03/10/23 14:41*	*03/14/23 11:59*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*03/10/23 14:41*	*03/14/23 11:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/23 13:31	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	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 15:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 15:47	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*03/04/23 11:06*	*03/05/23 15:47*	*1*
o-Terphenyl	*94*		*70 - 130*	*03/04/23 11:06*	*03/05/23 15:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.3**		4.95		mg/Kg			03/06/23 21:23	1

Client Sample ID: SS02

Date Collected: 03/01/23 11:55
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 12:20	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 12:20	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 12:20	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 12:20	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 12:20	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/10/23 14:41*	*03/14/23 12:20*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS02

Date Collected: 03/01/23 11:55
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/10/23 14:41*	*03/14/23 12:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/06/23 13:31	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	<50.0	U	50.0	mg/Kg		03/04/23 11:06	03/05/23 16:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/04/23 11:06	03/05/23 16:10	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/04/23 11:06	03/05/23 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*03/04/23 11:06*	*03/05/23 16:10*	*1*
o-Terphenyl	*80*		*70 - 130*	*03/04/23 11:06*	*03/05/23 16:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.7**		5.00	mg/Kg			03/06/23 21:28	1

Client Sample ID: SS03

Date Collected: 03/01/23 12:00
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/10/23 14:41	03/14/23 12:40	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/10/23 14:41	03/14/23 12:40	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/10/23 14:41	03/14/23 12:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		03/10/23 14:41	03/14/23 12:40	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		03/10/23 14:41	03/14/23 12:40	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/10/23 14:41	03/14/23 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*03/10/23 14:41*	*03/14/23 12:40*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/10/23 14:41*	*03/14/23 12:40*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/06/23 13:31	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS03

Lab Sample ID: 890-4218-3
Matrix: Solid
Date Collected: 03/01/23 12:00
Date Received: 03/01/23 15:37
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	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 16:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 16:32	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*03/04/23 11:06*	*03/05/23 16:32*	*1*
o-Terphenyl	*103*		*70 - 130*	*03/04/23 11:06*	*03/05/23 16:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.2**		4.98		mg/Kg			03/06/23 21:43	1

Client Sample ID: SS04

Lab Sample ID: 890-4218-4
Matrix: Solid
Date Collected: 03/01/23 12:05
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 13:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 13:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 13:01	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/10/23 14:41	03/14/23 13:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 13:01	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/10/23 14:41	03/14/23 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/10/23 14:41*	*03/14/23 13:01*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/10/23 14:41*	*03/14/23 13:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/23 13:31	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	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 16:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 16:54	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*03/04/23 11:06*	*03/05/23 16:54*	*1*
o-Terphenyl	*94*		*70 - 130*	*03/04/23 11:06*	*03/05/23 16:54*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS04

Lab Sample ID: 890-4218-4
Matrix: Solid
Date Collected: 03/01/23 12:05
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69.1		4.95		mg/Kg			03/06/23 21:48	1

Client Sample ID: SS05

Lab Sample ID: 890-4218-5
Matrix: Solid
Date Collected: 03/01/23 12:10
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:21	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:21	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 13:21	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*03/10/23 14:41*	*03/14/23 13:21*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/10/23 14:41*	*03/14/23 13:21*	*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			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/23 13:31	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	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 17:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 17:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*03/04/23 11:06*	*03/05/23 17:16*	*1*
o-Terphenyl	*91*		*70 - 130*	*03/04/23 11:06*	*03/05/23 17:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.0		4.95		mg/Kg			03/06/23 22:02	1

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS06

Lab Sample ID: 890-4218-6
Matrix: Solid
Date Collected: 03/01/23 12:15
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 13:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 13:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/10/23 14:41*	*03/14/23 13:41*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/10/23 14:41*	*03/14/23 13:41*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/23 13:31	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	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 17:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 17:38	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*03/04/23 11:06*	*03/05/23 17:38*	*1*
o-Terphenyl	*83*		*70 - 130*	*03/04/23 11:06*	*03/05/23 17:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62.1**		5.00		mg/Kg			03/06/23 22:07	1

Client Sample ID: SS07

Lab Sample ID: 890-4218-7
Matrix: Solid
Date Collected: 03/01/23 12:20
Date Received: 03/01/23 15:37
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		03/10/23 14:41	03/14/23 14:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/10/23 14:41	03/14/23 14:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/10/23 14:41	03/14/23 14:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/10/23 14:41	03/14/23 14:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/10/23 14:41	03/14/23 14:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/10/23 14:41	03/14/23 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/10/23 14:41*	*03/14/23 14:02*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS07

Date Collected: 03/01/23 12:20
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-7

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/10/23 14:41*	*03/14/23 14:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/23 13:31	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	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 18:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 18:00	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*03/04/23 11:06*	*03/05/23 18:00*	*1*
o-Terphenyl	*93*		*70 - 130*	*03/04/23 11:06*	*03/05/23 18:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**61.6**		4.99		mg/Kg			03/06/23 22:12	1

Client Sample ID: SS08

Date Collected: 03/01/23 12:25
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 14:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 14:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 14:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/10/23 14:41	03/14/23 14:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 14:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/10/23 14:41	03/14/23 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/10/23 14:41*	*03/14/23 14:22*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*03/10/23 14:41*	*03/14/23 14:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/23 13:31	1

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Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS08

Lab Sample ID: 890-4218-8
Matrix: Solid
Date Collected: 03/01/23 12:25
Date Received: 03/01/23 15:37
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	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 18:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 18:22	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 18:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*03/04/23 11:06*	*03/05/23 18:22*	*1*
o-Terphenyl	*85*		*70 - 130*	*03/04/23 11:06*	*03/05/23 18:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49.9**		4.97		mg/Kg			03/06/23 22:17	1

Client Sample ID: SS09

Lab Sample ID: 890-4218-9
Matrix: Solid
Date Collected: 03/01/23 12:30
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

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		03/10/23 14:41	03/14/23 14:43	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/10/23 14:41	03/14/23 14:43	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/10/23 14:41	03/14/23 14:43	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		03/10/23 14:41	03/14/23 14:43	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/10/23 14:41	03/14/23 14:43	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		03/10/23 14:41	03/14/23 14:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*03/10/23 14:41*	*03/14/23 14:43*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/10/23 14:41*	*03/14/23 14:43*	*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			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/23 13:31	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	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 18:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 18:45	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 11:06	03/05/23 18:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*03/04/23 11:06*	*03/05/23 18:45*	*1*
o-Terphenyl	*85*		*70 - 130*	*03/04/23 11:06*	*03/05/23 18:45*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS09

Lab Sample ID: 890-4218-9
Matrix: Solid
Date Collected: 03/01/23 12:30
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	54.8		4.96		mg/Kg			03/06/23 22:22	1

Client Sample ID: SS10

Lab Sample ID: 890-4218-10
Matrix: Solid
Date Collected: 03/01/23 12:35
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 15:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 15:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 15:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 15:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 15:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*03/10/23 14:41*	*03/14/23 15:03*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*03/10/23 14:41*	*03/14/23 15:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/23 13:31	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	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 19:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 19:06	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*03/04/23 11:06*	*03/05/23 19:06*	*1*
o-Terphenyl	*106*		*70 - 130*	*03/04/23 11:06*	*03/05/23 19:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55.6		5.02		mg/Kg			03/06/23 22:26	1

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS11

Date Collected: 03/01/23 12:40
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-11

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 17:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 17:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 17:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 17:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/10/23 14:41	03/14/23 17:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/10/23 14:41	03/14/23 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*03/10/23 14:41*	*03/14/23 17:27*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*03/10/23 14:41*	*03/14/23 17:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/23 11:31	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	<49.9	U *-	49.9		mg/Kg		03/04/23 10:55	03/05/23 17:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 10:55	03/05/23 17:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 10:55	03/05/23 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*03/04/23 10:55*	*03/05/23 17:28*	*1*
o-Terphenyl	*79*		*70 - 130*	*03/04/23 10:55*	*03/05/23 17:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**61.3**		4.98		mg/Kg			03/06/23 22:31	1

Client Sample ID: SS12

Date Collected: 03/01/23 12:45
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-12

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 17:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 17:47	1
Ethylbenzene	**0.00255**		0.00200		mg/Kg		03/10/23 14:41	03/14/23 17:47	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/10/23 14:41	03/14/23 17:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 17:47	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/10/23 14:41	03/14/23 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*03/10/23 14:41*	*03/14/23 17:47*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS12

Date Collected: 03/01/23 12:45
Date Received: 03/01/23 15:37
Sample Depth: 0.5'

Lab Sample ID: 890-4218-12

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/10/23 14:41*	*03/14/23 17:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/14/23 18:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/23 11:31	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	<49.9	U *-	49.9		mg/Kg		03/04/23 10:55	03/05/23 17:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/23 10:55	03/05/23 17:50	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/23 10:55	03/05/23 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*03/04/23 10:55*	*03/05/23 17:50*	*1*
o-Terphenyl	*91*		*70 - 130*	*03/04/23 10:55*	*03/05/23 17:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5590**		50.1		mg/Kg			03/05/23 03:42	10

Surrogate Summary

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-4218-1	SS01	95	94
890-4218-1 MS	SS01	103	103
890-4218-1 MSD	SS01	104	101
890-4218-2	SS02	102	93
890-4218-3	SS03	99	92
890-4218-4	SS04	100	95
890-4218-5	SS05	99	95
890-4218-6	SS06	100	93
890-4218-7	SS07	102	95
890-4218-8	SS08	103	96
890-4218-9	SS09	84	92
890-4218-10	SS10	94	96
890-4218-11	SS11	94	90
890-4218-12	SS12	83	92
LCS 880-48331/1-A	Lab Control Sample	102	100
LCSD 880-48331/2-A	Lab Control Sample Dup	100	103
MB 880-48331/5-A	Method Blank	94	91

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)
890-4212-A-21-B MS	Matrix Spike	107	96
890-4212-A-21-C MSD	Matrix Spike Duplicate	109	98
890-4217-A-1-B MS	Matrix Spike	104	101
890-4217-A-1-C MSD	Matrix Spike Duplicate	101	101
890-4218-1	SS01	88	94
890-4218-2	SS02	76	80
890-4218-3	SS03	101	103
890-4218-4	SS04	85	94
890-4218-5	SS05	86	91
890-4218-6	SS06	78	83
890-4218-7	SS07	89	93
890-4218-8	SS08	80	85
890-4218-9	SS09	81	85
890-4218-10	SS10	99	106
890-4218-11	SS11	86	79
890-4218-12	SS12	101	91
LCS 880-47811/2-A	Lab Control Sample	93	85
LCS 880-47814/2-A	Lab Control Sample	78	83
LCSD 880-47811/3-A	Lab Control Sample Dup	92	84
LCSD 880-47814/3-A	Lab Control Sample Dup	74	80
MB 880-47811/1-A	Method Blank	123	121
MB 880-47814/1-A	Method Blank	121	134 S1+

Surrogate Summary

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-48331/5-A
Matrix: Solid
Analysis Batch: 48569

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 48331

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/10/23 14:41	03/14/23 11:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/10/23 14:41	03/14/23 11:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/10/23 14:41	03/14/23 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*03/10/23 14:41*	*03/14/23 11:30*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*03/10/23 14:41*	*03/14/23 11:30*	*1*

Lab Sample ID: LCS 880-48331/1-A
Matrix: Solid
Analysis Batch: 48569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48331

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09897		mg/Kg		99	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09955		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2043		mg/Kg		102	70 - 130		
o-Xylene			0.100	0.1020		mg/Kg		102	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 880-48331/2-A
Matrix: Solid
Analysis Batch: 48569

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48331

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1026		mg/Kg		103	70 - 130	4	35
Toluene			0.100	0.1052		mg/Kg		105	70 - 130	1	35
Ethylbenzene			0.100	0.1010		mg/Kg		101	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2068		mg/Kg		103	70 - 130	1	35
o-Xylene			0.100	0.1031		mg/Kg		103	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-4218-1 MS
Matrix: Solid
Analysis Batch: 48569

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 48331

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1	0.0998	0.06755	F1	mg/Kg		68	70 - 130		
Toluene	<0.00200	U F1	0.0998	0.06831	F1	mg/Kg		68	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

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

Lab Sample ID: 890-4218-1 MS
Matrix: Solid
Analysis Batch: 48569

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 48331

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1	0.0998	0.06445	F1	mg/Kg		65	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.1307	F1	mg/Kg		65	70 - 130
o-Xylene	<0.00200	U F1	0.0998	0.06563	F1	mg/Kg		66	70 - 130

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

Lab Sample ID: 890-4218-1 MSD
Matrix: Solid
Analysis Batch: 48569

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 48331

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0990	0.08100		mg/Kg		82	70 - 130	18	35
Toluene	<0.00200	U F1	0.0990	0.08187		mg/Kg		83	70 - 130	18	35
Ethylbenzene	<0.00200	U F1	0.0990	0.07659		mg/Kg		77	70 - 130	17	35
m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.1554		mg/Kg		78	70 - 130	17	35
o-Xylene	<0.00200	U F1	0.0990	0.07805		mg/Kg		79	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-47811/1-A
Matrix: Solid
Analysis Batch: 47830

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47811

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/23 10:55	03/05/23 08:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/23 10:55	03/05/23 08:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/23 10:55	03/05/23 08:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*03/04/23 10:55*	*03/05/23 08:30*	*1*
o-Terphenyl	*121*		*70 - 130*	*03/04/23 10:55*	*03/05/23 08:30*	*1*

Lab Sample ID: LCS 880-47811/2-A
Matrix: Solid
Analysis Batch: 47830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47811

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	574.4	*-	mg/Kg		57	70 - 130
Diesel Range Organics (Over C10-C28)			1000	867.5		mg/Kg		87	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

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

Lab Sample ID: LCS 880-47811/2-A
Matrix: Solid
Analysis Batch: 47830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47811

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: LCSD 880-47811/3-A
Matrix: Solid
Analysis Batch: 47830

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47811

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	568.0	*-	mg/Kg		57	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	848.8		mg/Kg		85	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-4212-A-21-B MS
Matrix: Solid
Analysis Batch: 47830

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47811

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	773.3		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	722.1		mg/Kg		70	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 890-4212-A-21-C MSD
Matrix: Solid
Analysis Batch: 47830

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47811

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	800.0		mg/Kg		80	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	738.2		mg/Kg		71	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	98		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

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

Lab Sample ID: MB 880-47814/1-A
Matrix: Solid
Analysis Batch: 47828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47814

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 08:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 08:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/23 11:06	03/05/23 08:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*03/04/23 11:06*	*03/05/23 08:24*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*03/04/23 11:06*	*03/05/23 08:24*	*1*

Lab Sample ID: LCS 880-47814/2-A
Matrix: Solid
Analysis Batch: 47828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47814

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	880.3		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	892.6		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*78*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: LCSD 880-47814/3-A
Matrix: Solid
Analysis Batch: 47828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47814

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	880.3		mg/Kg		88	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	836.5		mg/Kg		84	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Lab Sample ID: 890-4217-A-1-B MS
Matrix: Solid
Analysis Batch: 47828

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47814

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	925.1		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	971.0		mg/Kg		96	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

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

Lab Sample ID: 890-4217-A-1-B MS
Matrix: Solid
Analysis Batch: 47828

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47814

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-4217-A-1-C MSD
Matrix: Solid
Analysis Batch: 47828

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47814

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	891.4		mg/Kg		87	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	959.8		mg/Kg		94	70 - 130	1	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-47773/1-A
Matrix: Solid
Analysis Batch: 47825

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/05/23 02:25	1

Lab Sample ID: LCS 880-47773/2-A
Matrix: Solid
Analysis Batch: 47825

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	231.8		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-47773/3-A
Matrix: Solid
Analysis Batch: 47825

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: 880-25414-A-39-B MS
Matrix: Solid
Analysis Batch: 47825

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	786		250	1051		mg/Kg		106	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-25414-A-39-C MSD
Matrix: Solid
Analysis Batch: 47825

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	786		250	1052		mg/Kg		106	90 - 110	0	20

Lab Sample ID: MB 880-47841/1-A
Matrix: Solid
Analysis Batch: 47995

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/06/23 20:06	1

Lab Sample ID: LCS 880-47841/2-A
Matrix: Solid
Analysis Batch: 47995

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	266.6		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-47841/3-A
Matrix: Solid
Analysis Batch: 47995

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	267.5		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 890-4218-2 MS
Matrix: Solid
Analysis Batch: 47995

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	50.7		250	316.6		mg/Kg		106	90 - 110		

Lab Sample ID: 890-4218-2 MSD
Matrix: Solid
Analysis Batch: 47995

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	50.7		250	315.9		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

GC VOA

Prep Batch: 48331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Total/NA	Solid	5035	
890-4218-2	SS02	Total/NA	Solid	5035	
890-4218-3	SS03	Total/NA	Solid	5035	
890-4218-4	SS04	Total/NA	Solid	5035	
890-4218-5	SS05	Total/NA	Solid	5035	
890-4218-6	SS06	Total/NA	Solid	5035	
890-4218-7	SS07	Total/NA	Solid	5035	
890-4218-8	SS08	Total/NA	Solid	5035	
890-4218-9	SS09	Total/NA	Solid	5035	
890-4218-10	SS10	Total/NA	Solid	5035	
890-4218-11	SS11	Total/NA	Solid	5035	
890-4218-12	SS12	Total/NA	Solid	5035	
MB 880-48331/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-48331/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-48331/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4218-1 MS	SS01	Total/NA	Solid	5035	
890-4218-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 48569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Total/NA	Solid	8021B	48331
890-4218-2	SS02	Total/NA	Solid	8021B	48331
890-4218-3	SS03	Total/NA	Solid	8021B	48331
890-4218-4	SS04	Total/NA	Solid	8021B	48331
890-4218-5	SS05	Total/NA	Solid	8021B	48331
890-4218-6	SS06	Total/NA	Solid	8021B	48331
890-4218-7	SS07	Total/NA	Solid	8021B	48331
890-4218-8	SS08	Total/NA	Solid	8021B	48331
890-4218-9	SS09	Total/NA	Solid	8021B	48331
890-4218-10	SS10	Total/NA	Solid	8021B	48331
890-4218-11	SS11	Total/NA	Solid	8021B	48331
890-4218-12	SS12	Total/NA	Solid	8021B	48331
MB 880-48331/5-A	Method Blank	Total/NA	Solid	8021B	48331
LCS 880-48331/1-A	Lab Control Sample	Total/NA	Solid	8021B	48331
LCSD 880-48331/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	48331
890-4218-1 MS	SS01	Total/NA	Solid	8021B	48331
890-4218-1 MSD	SS01	Total/NA	Solid	8021B	48331

Analysis Batch: 48629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Total/NA	Solid	Total BTEX	
890-4218-2	SS02	Total/NA	Solid	Total BTEX	
890-4218-3	SS03	Total/NA	Solid	Total BTEX	
890-4218-4	SS04	Total/NA	Solid	Total BTEX	
890-4218-5	SS05	Total/NA	Solid	Total BTEX	
890-4218-6	SS06	Total/NA	Solid	Total BTEX	
890-4218-7	SS07	Total/NA	Solid	Total BTEX	
890-4218-8	SS08	Total/NA	Solid	Total BTEX	
890-4218-9	SS09	Total/NA	Solid	Total BTEX	
890-4218-10	SS10	Total/NA	Solid	Total BTEX	
890-4218-11	SS11	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

GC VOA (Continued)

Analysis Batch: 48629 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-12	SS12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 47811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-11	SS11	Total/NA	Solid	8015NM Prep	
890-4218-12	SS12	Total/NA	Solid	8015NM Prep	
MB 880-47811/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47811/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47811/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4212-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4212-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 47814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Total/NA	Solid	8015NM Prep	
890-4218-2	SS02	Total/NA	Solid	8015NM Prep	
890-4218-3	SS03	Total/NA	Solid	8015NM Prep	
890-4218-4	SS04	Total/NA	Solid	8015NM Prep	
890-4218-5	SS05	Total/NA	Solid	8015NM Prep	
890-4218-6	SS06	Total/NA	Solid	8015NM Prep	
890-4218-7	SS07	Total/NA	Solid	8015NM Prep	
890-4218-8	SS08	Total/NA	Solid	8015NM Prep	
890-4218-9	SS09	Total/NA	Solid	8015NM Prep	
890-4218-10	SS10	Total/NA	Solid	8015NM Prep	
MB 880-47814/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47814/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47814/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4217-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4217-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 47828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Total/NA	Solid	8015B NM	47814
890-4218-2	SS02	Total/NA	Solid	8015B NM	47814
890-4218-3	SS03	Total/NA	Solid	8015B NM	47814
890-4218-4	SS04	Total/NA	Solid	8015B NM	47814
890-4218-5	SS05	Total/NA	Solid	8015B NM	47814
890-4218-6	SS06	Total/NA	Solid	8015B NM	47814
890-4218-7	SS07	Total/NA	Solid	8015B NM	47814
890-4218-8	SS08	Total/NA	Solid	8015B NM	47814
890-4218-9	SS09	Total/NA	Solid	8015B NM	47814
890-4218-10	SS10	Total/NA	Solid	8015B NM	47814
MB 880-47814/1-A	Method Blank	Total/NA	Solid	8015B NM	47814
LCS 880-47814/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47814
LCSD 880-47814/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47814
890-4217-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	47814
890-4217-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47814

QC Association Summary

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

GC Semi VOA

Analysis Batch: 47830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-11	SS11	Total/NA	Solid	8015B NM	47811
890-4218-12	SS12	Total/NA	Solid	8015B NM	47811
MB 880-47811/1-A	Method Blank	Total/NA	Solid	8015B NM	47811
LCS 880-47811/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47811
LCSD 880-47811/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47811
890-4212-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	47811
890-4212-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47811

Analysis Batch: 47902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Total/NA	Solid	8015 NM	
890-4218-2	SS02	Total/NA	Solid	8015 NM	
890-4218-3	SS03	Total/NA	Solid	8015 NM	
890-4218-4	SS04	Total/NA	Solid	8015 NM	
890-4218-5	SS05	Total/NA	Solid	8015 NM	
890-4218-6	SS06	Total/NA	Solid	8015 NM	
890-4218-7	SS07	Total/NA	Solid	8015 NM	
890-4218-8	SS08	Total/NA	Solid	8015 NM	
890-4218-9	SS09	Total/NA	Solid	8015 NM	
890-4218-10	SS10	Total/NA	Solid	8015 NM	
890-4218-11	SS11	Total/NA	Solid	8015 NM	
890-4218-12	SS12	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 47773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-12	SS12	Soluble	Solid	DI Leach	
MB 880-47773/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-47773/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-47773/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-25414-A-39-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-25414-A-39-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 47825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-12	SS12	Soluble	Solid	300.0	47773
MB 880-47773/1-A	Method Blank	Soluble	Solid	300.0	47773
LCS 880-47773/2-A	Lab Control Sample	Soluble	Solid	300.0	47773
LCSD 880-47773/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	47773
880-25414-A-39-B MS	Matrix Spike	Soluble	Solid	300.0	47773
880-25414-A-39-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	47773

Leach Batch: 47841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Soluble	Solid	DI Leach	
890-4218-2	SS02	Soluble	Solid	DI Leach	
890-4218-3	SS03	Soluble	Solid	DI Leach	
890-4218-4	SS04	Soluble	Solid	DI Leach	
890-4218-5	SS05	Soluble	Solid	DI Leach	
890-4218-6	SS06	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

HPLC/IC (Continued)

Leach Batch: 47841 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-7	SS07	Soluble	Solid	DI Leach	
890-4218-8	SS08	Soluble	Solid	DI Leach	
890-4218-9	SS09	Soluble	Solid	DI Leach	
890-4218-10	SS10	Soluble	Solid	DI Leach	
890-4218-11	SS11	Soluble	Solid	DI Leach	
MB 880-47841/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-47841/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-47841/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4218-2 MS	SS02	Soluble	Solid	DI Leach	
890-4218-2 MSD	SS02	Soluble	Solid	DI Leach	

Analysis Batch: 47995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4218-1	SS01	Soluble	Solid	300.0	47841
890-4218-2	SS02	Soluble	Solid	300.0	47841
890-4218-3	SS03	Soluble	Solid	300.0	47841
890-4218-4	SS04	Soluble	Solid	300.0	47841
890-4218-5	SS05	Soluble	Solid	300.0	47841
890-4218-6	SS06	Soluble	Solid	300.0	47841
890-4218-7	SS07	Soluble	Solid	300.0	47841
890-4218-8	SS08	Soluble	Solid	300.0	47841
890-4218-9	SS09	Soluble	Solid	300.0	47841
890-4218-10	SS10	Soluble	Solid	300.0	47841
890-4218-11	SS11	Soluble	Solid	300.0	47841
MB 880-47841/1-A	Method Blank	Soluble	Solid	300.0	47841
LCS 880-47841/2-A	Lab Control Sample	Soluble	Solid	300.0	47841
LCSD 880-47841/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	47841
890-4218-2 MS	SS02	Soluble	Solid	300.0	47841
890-4218-2 MSD	SS02	Soluble	Solid	300.0	47841

Lab Chronicle

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS01
Date Collected: 03/01/23 11:50
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 11:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 15:47	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 21:23	CH	EET MID

Client Sample ID: SS02
Date Collected: 03/01/23 11:55
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 12:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 16:10	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 21:28	CH	EET MID

Client Sample ID: SS03
Date Collected: 03/01/23 12:00
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-3
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	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 12:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 16:32	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 21:43	CH	EET MID

Client Sample ID: SS04
Date Collected: 03/01/23 12:05
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 13:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS04
Date Collected: 03/01/23 12:05
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-4
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			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 16:54	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 21:48	CH	EET MID

Client Sample ID: SS05
Date Collected: 03/01/23 12:10
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 13:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 17:16	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 22:02	CH	EET MID

Client Sample ID: SS06
Date Collected: 03/01/23 12:15
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-6
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			5.03 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 13:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 17:38	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 22:07	CH	EET MID

Client Sample ID: SS07
Date Collected: 03/01/23 12:20
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 14:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 18:00	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS07
Date Collected: 03/01/23 12:20
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 22:12	CH	EET MID

Client Sample ID: SS08
Date Collected: 03/01/23 12:25
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 14:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 18:22	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 22:17	CH	EET MID

Client Sample ID: SS09
Date Collected: 03/01/23 12:30
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-9
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			5.05 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 14:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 18:45	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 22:22	CH	EET MID

Client Sample ID: SS10
Date Collected: 03/01/23 12:35
Date Received: 03/01/23 15:37

Lab Sample ID: 890-4218-10
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			5.02 g	5 mL	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 15:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47814	03/04/23 11:06	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47828	03/05/23 19:06	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 22:26	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Client Sample ID: SS11

Lab Sample ID: 890-4218-11

Date Collected: 03/01/23 12:40
Matrix: Solid
Date Received: 03/01/23 15:37

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	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 17:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 11:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47811	03/04/23 10:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47830	03/05/23 17:28	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	47841	03/05/23 14:44	CH	EET MID
Soluble	Analysis	300.0		1			47995	03/06/23 22:31	CH	EET MID

Client Sample ID: SS12

Lab Sample ID: 890-4218-12

Date Collected: 03/01/23 12:45
Matrix: Solid
Date Received: 03/01/23 15:37

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	48331	03/10/23 14:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48569	03/14/23 17:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			48629	03/14/23 18:25	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47902	03/06/23 11:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47811	03/04/23 10:55	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47830	03/05/23 17:50	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	47773	03/03/23 15:56	CH	EET MID
Soluble	Analysis	300.0		10			47825	03/05/23 03:42	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: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

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: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

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: Jazzmaster 17 ST 3H

Job ID: 890-4218-1
SDG: 03D2024165

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4218-1	SS01	Solid	03/01/23 11:50	03/01/23 15:37	0.5'
890-4218-2	SS02	Solid	03/01/23 11:55	03/01/23 15:37	0.5'
890-4218-3	SS03	Solid	03/01/23 12:00	03/01/23 15:37	0.5'
890-4218-4	SS04	Solid	03/01/23 12:05	03/01/23 15:37	0.5'
890-4218-5	SS05	Solid	03/01/23 12:10	03/01/23 15:37	0.5'
890-4218-6	SS06	Solid	03/01/23 12:15	03/01/23 15:37	0.5'
890-4218-7	SS07	Solid	03/01/23 12:20	03/01/23 15:37	0.5'
890-4218-8	SS08	Solid	03/01/23 12:25	03/01/23 15:37	0.5'
890-4218-9	SS09	Solid	03/01/23 12:30	03/01/23 15:37	0.5'
890-4218-10	SS10	Solid	03/01/23 12:35	03/01/23 15:37	0.5'
890-4218-11	SS11	Solid	03/01/23 12:40	03/01/23 15:37	0.5'
890-4218-12	SS12	Solid	03/01/23 12:45	03/01/23 15:37	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: _____

www.xenco.com Page 1 of 2

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

Work Order Comments

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

Project Name:	Jazzmaster 17 ST 3H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024165	Due Date:	
Project Location:	32.31105,-103.58742	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.8
Total Containers:		Corrected Temperature:	2.6

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	Soil	3/1/2023	1150	0.5'	Comp	1		x	x	x
SS02	Soil	3/1/2023	1155	0.5'	Comp	1		x	x	x
SS03	Soil	3/1/2023	1200	0.5'	Comp	1		x	x	x
SS04	Soil	3/1/2023	1205	0.5'	Comp	1		x	x	x
SS05	Soil	3/1/2023	1210	0.5'	Comp	1		x	x	x
SS06	Soil	3/1/2023	1215	0.5'	Comp	1		x	x	x
SS07	Soil	3/1/2023	1220	0.5'	Comp	1		x	x	x
SS08	Soil	3/1/2023	1225	0.5'	Comp	1		x	x	x
SS09	Soil	3/1/2023	1230	0.5'	Comp	1		x	x	x
SS10	Soil	3/1/2023	1235	0.5'	Comp	1		x	x	x

Parameters

ANALYSIS REQUEST

Preservative Codes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten	Amanda Stutz	3-1-23 1537			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

S

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

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

Work Order Comments

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

Project Name:	Jazzmaster 17 ST 3H	Turn Around	
Project Number:	03D2024165	☑ Routine ☐ Rush	
Project Location:	32.31105,-103.58742	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SS11	Soil	3/1/2023	1240	0.5'	Comp	1		x	x	x	
SS12	Soil	3/1/2023	1245	0.5'	Comp	1		x	x	x	

ANALYSIS REQUEST / **Parameters**

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten	Amanda Stutz	3-1-23 1537	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

3/14/2023

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4218-1
SDG Number: 03D2024165

Login Number: 4218
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: 890-4218-1
SDG Number: 03D2024165

Login Number: 4218
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 03/03/23 01:06 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	

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/4/2023 7:08:37 PM

JOB DESCRIPTION

Jazzmaster 17 State 003H
SDG NUMBER 03D2024165

JOB NUMBER

890-4587-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

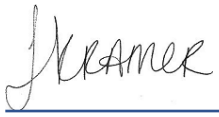
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
5/4/2023 7:08:37 PM

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

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Laboratory Job ID: 890-4587-1
SDG: 03D2024165

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Definitions/Glossary

Client: Ensolum Job ID: 890-4587-1
Project/Site: Jazzmaster 17 State 003H SDG: 03D2024165

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Job ID: 890-4587-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4587-1

Receipt
The samples were received on 4/27/2023 2:45 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 3.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4587-1), FS02 (890-4587-2), FS03 (890-4587-3), FS04 (890-4587-4) and FS05 (890-4587-5).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-52339/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: The following samples were diluted due to the nature of the sample matrix: (890-4587-A-1-E MS) and (890-4587-A-1-F MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS05 (890-4587-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-52362 recovered above the upper control limit for Toluene. An acceptable CCV was ran within the 12 hour window therefore, the data have been reported. The associated sample is impacted: (CCV 880-52362/29).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-52362 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-52286 and analytical batch 880-52249 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-27756-A-4-C). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: CCV biased low however an acceptable CCV was ran within the 12 hour window therefore the data was qualified and reported.(CCV 880-52249/45)

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 for preparation batch 880-52262 and analytical batch 880-52503 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.The associated samples are: FS01 (890-4587-1), FS02 (890-4587-2), FS03 (890-4587-3), FS04 (890-4587-4), FS05 (890-4587-5), (890-4587-A-1-B MS) and (890-4587-A-1-C MSD).

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

Case Narrative

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Job ID: 890-4587-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Client Sample ID: FS01

Date Collected: 04/27/23 10:35
Date Received: 04/27/23 14:45
Sample Depth: 1.0

Lab Sample ID: 890-4587-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U F1	0.00198		mg/Kg		05/01/23 11:17	05/03/23 05:46	1
Toluene	<0.00198	U F1	0.00198		mg/Kg		05/01/23 11:17	05/03/23 05:46	1
Ethylbenzene	<0.00198	U F1 F2	0.00198		mg/Kg		05/01/23 11:17	05/03/23 05:46	1
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.00396		mg/Kg		05/01/23 11:17	05/03/23 05:46	1
o-Xylene	<0.00198	U F1 F2	0.00198		mg/Kg		05/01/23 11:17	05/03/23 05:46	1
Xylenes, Total	<0.00396	U F1	0.00396		mg/Kg		05/01/23 11:17	05/03/23 05:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/01/23 11:17*	*05/03/23 05:46*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/01/23 11:17*	*05/03/23 05:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			05/03/23 11:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/02/23 10:41	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	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 17:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 17:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 17:01	1
Total TPH	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*05/01/23 10:35*	*05/01/23 17:01*	*1*
o-Terphenyl	*123*		*70 - 130*	*05/01/23 10:35*	*05/01/23 17:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**72.8**	**F1**	5.01		mg/Kg			05/03/23 13:56	1

Client Sample ID: FS02

Date Collected: 04/27/23 10:45
Date Received: 04/27/23 14:45
Sample Depth: 1.0

Lab Sample ID: 890-4587-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 06:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 06:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 06:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/01/23 11:17	05/03/23 06:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 06:12	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/01/23 11:17	05/03/23 06:12	1

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Client Sample ID: FS02

Date Collected: 04/27/23 10:45
Date Received: 04/27/23 14:45
Sample Depth: 1.0

Lab Sample ID: 890-4587-2
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*05/01/23 11:17*	*05/03/23 06:12*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/01/23 11:17*	*05/03/23 06:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/03/23 11:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/02/23 10:41	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		05/01/23 10:35	05/01/23 17:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/01/23 10:35	05/01/23 17:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/01/23 10:35	05/01/23 17:22	1
Total TPH	<49.9	U	49.9	mg/Kg		05/01/23 10:35	05/01/23 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/01/23 10:35*	*05/01/23 17:22*	*1*
o-Terphenyl	*127*		*70 - 130*	*05/01/23 10:35*	*05/01/23 17:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**66.1**		4.99	mg/Kg			05/03/23 14:12	1

Client Sample ID: FS03

Date Collected: 04/27/23 11:05
Date Received: 04/27/23 14:45
Sample Depth: 1.0

Lab Sample ID: 890-4587-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/01/23 11:17	05/03/23 06:38	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/01/23 11:17	05/03/23 06:38	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/01/23 11:17	05/03/23 06:38	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/01/23 11:17	05/03/23 06:38	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/01/23 11:17	05/03/23 06:38	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/01/23 11:17	05/03/23 06:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/01/23 11:17*	*05/03/23 06:38*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/01/23 11:17*	*05/03/23 06:38*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			05/03/23 11:14	1

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Client Sample ID: FS03

Lab Sample ID: 890-4587-3
Matrix: Solid
Date Collected: 04/27/23 11:05
Date Received: 04/27/23 14:45
Sample Depth: 1.0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/02/23 10:41	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		05/01/23 10:35	05/01/23 17:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/01/23 10:35	05/01/23 17:44	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/01/23 10:35	05/01/23 17:44	1
Total TPH	<49.9	U	49.9		mg/Kg		05/01/23 10:35	05/01/23 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/01/23 10:35*	*05/01/23 17:44*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/01/23 10:35*	*05/01/23 17:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**69.1**		4.95		mg/Kg			05/03/23 14:17	1

Client Sample ID: FS04

Lab Sample ID: 890-4587-4
Matrix: Solid
Date Collected: 04/27/23 11:15
Date Received: 04/27/23 14:45
Sample Depth: 1.0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/01/23 11:17	05/03/23 07:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:05	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/01/23 11:17	05/03/23 07:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*05/01/23 11:17*	*05/03/23 07:05*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*05/01/23 11:17*	*05/03/23 07:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/03/23 11:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			05/02/23 10:41	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	<49.8	U	49.8		mg/Kg		05/01/23 10:35	05/01/23 18:06	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/01/23 10:35	05/01/23 18:06	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/01/23 10:35	05/01/23 18:06	1

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Client Sample ID: FS04

Lab Sample ID: 890-4587-4
Matrix: Solid
Date Collected: 04/27/23 11:15
Date Received: 04/27/23 14:45
Sample Depth: 1.0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg		05/01/23 10:35	05/01/23 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*05/01/23 10:35*	*05/01/23 18:06*	*1*
o-Terphenyl	*122*		*70 - 130*	*05/01/23 10:35*	*05/01/23 18:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**64.3**		4.99		mg/Kg			05/03/23 14:34	1

Client Sample ID: FS05

Lab Sample ID: 890-4587-5
Matrix: Solid
Date Collected: 04/27/23 11:20
Date Received: 04/27/23 14:45
Sample Depth: 1.0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/01/23 11:17	05/03/23 07:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 07:32	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/01/23 11:17	05/03/23 07:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*05/01/23 11:17*	*05/03/23 07:32*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/01/23 11:17*	*05/03/23 07:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/03/23 11:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/02/23 10:41	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	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 18:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 18:27	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 18:27	1
Total TPH	<50.0	U	50.0		mg/Kg		05/01/23 10:35	05/01/23 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/01/23 10:35*	*05/01/23 18:27*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/01/23 10:35*	*05/01/23 18:27*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Client Sample ID: FS05

Date Collected: 04/27/23 11:20
Date Received: 04/27/23 14:45
Sample Depth: 1.0

Lab Sample ID: 890-4587-5

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	65.0		5.04		mg/Kg			05/03/23 14:39	1

Surrogate Summary

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-4587-1	FS01	111	84
890-4587-1 MS	FS01	120	77
890-4587-1 MSD	FS01	113	88
890-4587-2	FS02	129	86
890-4587-3	FS03	122	90
890-4587-4	FS04	127	84
890-4587-5	FS05	132 S1+	93
LCS 880-52289/1-A	Lab Control Sample	117	92
LCSD 880-52289/2-A	Lab Control Sample Dup	112	104
MB 880-52289/5-A	Method Blank	70	82
MB 880-52339/5-A	Method Blank	68 S1-	83

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-27756-A-4-D MS	Matrix Spike	83	81
880-27756-A-4-E MSD	Matrix Spike Duplicate	84	84
890-4587-1	FS01	121	123
890-4587-2	FS02	120	127
890-4587-3	FS03	100	104
890-4587-4	FS04	119	122
890-4587-5	FS05	95	101
LCS 880-52286/2-A	Lab Control Sample	98	104
LCSD 880-52286/3-A	Lab Control Sample Dup	114	120
MB 880-52286/1-A	Method Blank	113	134 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52289/5-A
Matrix: Solid
Analysis Batch: 52362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52289

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 05:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 05:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 05:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/01/23 11:17	05/03/23 05:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/01/23 11:17	05/03/23 05:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/01/23 11:17	05/03/23 05:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*05/01/23 11:17*	*05/03/23 05:20*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*05/01/23 11:17*	*05/03/23 05:20*	*1*

Lab Sample ID: LCS 880-52289/1-A
Matrix: Solid
Analysis Batch: 52362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52289

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1195		mg/Kg		119	70 - 130		
Toluene			0.100	0.1194		mg/Kg		119	70 - 130		
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2132		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)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-52289/2-A
Matrix: Solid
Analysis Batch: 52362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52289

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1247		mg/Kg		125	70 - 130	4	35
Toluene			0.100	0.1244		mg/Kg		124	70 - 130	4	35
Ethylbenzene			0.100	0.1055		mg/Kg		105	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2008		mg/Kg		100	70 - 130	6	35
o-Xylene			0.100	0.1050		mg/Kg		105	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-4587-1 MS
Matrix: Solid
Analysis Batch: 52362

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 52289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U F1	0.0998	<0.00200	U F1	mg/Kg		2	70 - 130		
Toluene	<0.00198	U F1	0.0998	<0.00200	U F1	mg/Kg		0	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

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

Lab Sample ID: 890-4587-1 MS
Matrix: Solid
Analysis Batch: 52362

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 52289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U F1 F2	0.0998	0.002590	F1	mg/Kg		3	70 - 130
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.200	0.004991	F1	mg/Kg		3	70 - 130
o-Xylene	<0.00198	U F1 F2	0.0998	0.002593	F1	mg/Kg		3	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*

Lab Sample ID: 890-4587-1 MSD
Matrix: Solid
Analysis Batch: 52362

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 52289

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U F1	0.100	<0.00201	U F1	mg/Kg		1	70 - 130	28	35
Toluene	<0.00198	U F1	0.100	<0.00201	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00198	U F1 F2	0.100	<0.00201	U F1 F2	mg/Kg		0.6	70 - 130	122	35
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.201	<0.00402	U F1 F2	mg/Kg		0.7	70 - 130	108	35
o-Xylene	<0.00198	U F1 F2	0.100	<0.00201	U F1 F2	mg/Kg		1	70 - 130	71	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: MB 880-52339/5-A
Matrix: Solid
Analysis Batch: 52362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52339

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:45	05/02/23 15:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:45	05/02/23 15:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:45	05/02/23 15:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/01/23 15:45	05/02/23 15:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/01/23 15:45	05/02/23 15:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/01/23 15:45	05/02/23 15:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*05/01/23 15:45*	*05/02/23 15:51*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*05/01/23 15:45*	*05/02/23 15:51*	*1*

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

Lab Sample ID: MB 880-52286/1-A
Matrix: Solid
Analysis Batch: 52249

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52286

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/01/23 08:35	05/01/23 10:23	1

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

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

Lab Sample ID: MB 880-52286/1-A
Matrix: Solid
Analysis Batch: 52249

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52286

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/01/23 08:35	05/01/23 10:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/01/23 08:35	05/01/23 10:23	1
Total TPH	<50.0	U	50.0		mg/Kg		05/01/23 08:35	05/01/23 10:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/01/23 08:35*	*05/01/23 10:23*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*05/01/23 08:35*	*05/01/23 10:23*	*1*

Lab Sample ID: LCS 880-52286/2-A
Matrix: Solid
Analysis Batch: 52249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52286

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	829.8		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	764.3		mg/Kg		76	70 - 130		

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

Lab Sample ID: LCSD 880-52286/3-A
Matrix: Solid
Analysis Batch: 52249

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52286

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	902.4		mg/Kg		90	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	899.4		mg/Kg		90	70 - 130	16	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*120*		*70 - 130*

Lab Sample ID: 880-27756-A-4-D MS
Matrix: Solid
Analysis Batch: 52249

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52286

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1054		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	773.6		mg/Kg		76	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*83*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

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

Lab Sample ID: 880-27756-A-4-D MS
Matrix: Solid
Analysis Batch: 52249

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52286

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl	81		70 - 130

Lab Sample ID: 880-27756-A-4-E MSD
Matrix: Solid
Analysis Batch: 52249

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52286

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1184		mg/Kg		119	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	800.7		mg/Kg		79	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52262/1-A
Matrix: Solid
Analysis Batch: 52503

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/03/23 12:25	1

Lab Sample ID: LCS 880-52262/2-A
Matrix: Solid
Analysis Batch: 52503

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	232.3		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-52262/3-A
Matrix: Solid
Analysis Batch: 52503

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	234.2		mg/Kg		94	90 - 110	1	20

Lab Sample ID: 890-4587-1 MS
Matrix: Solid
Analysis Batch: 52503

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	72.8	F1	251	272.5	F1	mg/Kg		80	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4587-1 MSD
Matrix: Solid
Analysis Batch: 52503

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	72.8	F1	251	272.0	F1	mg/Kg		80	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

GC VOA

Prep Batch: 52289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Total/NA	Solid	5035	
890-4587-2	FS02	Total/NA	Solid	5035	
890-4587-3	FS03	Total/NA	Solid	5035	
890-4587-4	FS04	Total/NA	Solid	5035	
890-4587-5	FS05	Total/NA	Solid	5035	
MB 880-52289/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52289/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52289/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4587-1 MS	FS01	Total/NA	Solid	5035	
890-4587-1 MSD	FS01	Total/NA	Solid	5035	

Prep Batch: 52339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-52339/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 52362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Total/NA	Solid	8021B	52289
890-4587-2	FS02	Total/NA	Solid	8021B	52289
890-4587-3	FS03	Total/NA	Solid	8021B	52289
890-4587-4	FS04	Total/NA	Solid	8021B	52289
890-4587-5	FS05	Total/NA	Solid	8021B	52289
MB 880-52289/5-A	Method Blank	Total/NA	Solid	8021B	52289
MB 880-52339/5-A	Method Blank	Total/NA	Solid	8021B	52339
LCS 880-52289/1-A	Lab Control Sample	Total/NA	Solid	8021B	52289
LCSD 880-52289/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52289
890-4587-1 MS	FS01	Total/NA	Solid	8021B	52289
890-4587-1 MSD	FS01	Total/NA	Solid	8021B	52289

Analysis Batch: 52497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Total/NA	Solid	Total BTEX	
890-4587-2	FS02	Total/NA	Solid	Total BTEX	
890-4587-3	FS03	Total/NA	Solid	Total BTEX	
890-4587-4	FS04	Total/NA	Solid	Total BTEX	
890-4587-5	FS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 52249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Total/NA	Solid	8015B NM	52286
890-4587-2	FS02	Total/NA	Solid	8015B NM	52286
890-4587-3	FS03	Total/NA	Solid	8015B NM	52286
890-4587-4	FS04	Total/NA	Solid	8015B NM	52286
890-4587-5	FS05	Total/NA	Solid	8015B NM	52286
MB 880-52286/1-A	Method Blank	Total/NA	Solid	8015B NM	52286
LCS 880-52286/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	52286
LCSD 880-52286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	52286
880-27756-A-4-D MS	Matrix Spike	Total/NA	Solid	8015B NM	52286
880-27756-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	52286

QC Association Summary

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

GC Semi VOA

Prep Batch: 52286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Total/NA	Solid	8015NM Prep	
890-4587-2	FS02	Total/NA	Solid	8015NM Prep	
890-4587-3	FS03	Total/NA	Solid	8015NM Prep	
890-4587-4	FS04	Total/NA	Solid	8015NM Prep	
890-4587-5	FS05	Total/NA	Solid	8015NM Prep	
MB 880-52286/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-52286/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-52286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-27756-A-4-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-27756-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 52381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Total/NA	Solid	8015 NM	
890-4587-2	FS02	Total/NA	Solid	8015 NM	
890-4587-3	FS03	Total/NA	Solid	8015 NM	
890-4587-4	FS04	Total/NA	Solid	8015 NM	
890-4587-5	FS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 52262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Soluble	Solid	DI Leach	
890-4587-2	FS02	Soluble	Solid	DI Leach	
890-4587-3	FS03	Soluble	Solid	DI Leach	
890-4587-4	FS04	Soluble	Solid	DI Leach	
890-4587-5	FS05	Soluble	Solid	DI Leach	
MB 880-52262/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52262/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52262/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4587-1 MS	FS01	Soluble	Solid	DI Leach	
890-4587-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 52503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4587-1	FS01	Soluble	Solid	300.0	52262
890-4587-2	FS02	Soluble	Solid	300.0	52262
890-4587-3	FS03	Soluble	Solid	300.0	52262
890-4587-4	FS04	Soluble	Solid	300.0	52262
890-4587-5	FS05	Soluble	Solid	300.0	52262
MB 880-52262/1-A	Method Blank	Soluble	Solid	300.0	52262
LCS 880-52262/2-A	Lab Control Sample	Soluble	Solid	300.0	52262
LCSD 880-52262/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52262
890-4587-1 MS	FS01	Soluble	Solid	300.0	52262
890-4587-1 MSD	FS01	Soluble	Solid	300.0	52262

Lab Chronicle

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Client Sample ID: FS01

Lab Sample ID: 890-4587-1

Date Collected: 04/27/23 10:35

Matrix: Solid

Date Received: 04/27/23 14:45

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	52289	05/01/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52362	05/03/23 05:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52497	05/03/23 11:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			52381	05/02/23 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52286	05/01/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52249	05/01/23 17:01	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	52262	05/01/23 09:37	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52503	05/03/23 13:56	SMC	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-4587-2

Date Collected: 04/27/23 10:45

Matrix: Solid

Date Received: 04/27/23 14:45

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	52289	05/01/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52362	05/03/23 06:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52497	05/03/23 11:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			52381	05/02/23 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	52286	05/01/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52249	05/01/23 17:22	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	52262	05/01/23 09:37	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52503	05/03/23 14:12	SMC	EET MID

Client Sample ID: FS03

Lab Sample ID: 890-4587-3

Date Collected: 04/27/23 11:05

Matrix: Solid

Date Received: 04/27/23 14:45

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	52289	05/01/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52362	05/03/23 06:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52497	05/03/23 11:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			52381	05/02/23 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	52286	05/01/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52249	05/01/23 17:44	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	52262	05/01/23 09:37	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52503	05/03/23 14:17	SMC	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-4587-4

Date Collected: 04/27/23 11:15

Matrix: Solid

Date Received: 04/27/23 14:45

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	52289	05/01/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52362	05/03/23 07:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52497	05/03/23 11:14	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Client Sample ID: FS04

Date Collected: 04/27/23 11:15
Date Received: 04/27/23 14:45

Lab Sample ID: 890-4587-4

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			52381	05/02/23 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.031 g	10 mL	52286	05/01/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52249	05/01/23 18:06	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	52262	05/01/23 09:37	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52503	05/03/23 14:34	SMC	EET MID

Client Sample ID: FS05

Date Collected: 04/27/23 11:20
Date Received: 04/27/23 14:45

Lab Sample ID: 890-4587-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	52289	05/01/23 11:17	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52362	05/03/23 07:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52497	05/03/23 11:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			52381	05/02/23 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52286	05/01/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52249	05/01/23 18:27	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	52262	05/01/23 09:37	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52503	05/03/23 14:39	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

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: Jazzmaster 17 State 003H

Job ID: 890-4587-1
SDG: 03D2024165

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4587-1	FS01	Solid	04/27/23 10:35	04/27/23 14:45	1.0
890-4587-2	FS02	Solid	04/27/23 10:45	04/27/23 14:45	1.0
890-4587-3	FS03	Solid	04/27/23 11:05	04/27/23 14:45	1.0
890-4587-4	FS04	Solid	04/27/23 11:15	04/27/23 14:45	1.0
890-4587-5	FS05	Solid	04/27/23 11:20	04/27/23 14:45	1.0

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	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:	Jazzmaster 17 State 003H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024165	Due Date:	
Project Location:	32.31106,-103.58743	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:		Tnm-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:		-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:		3.8	
Total Containers:		Corrected Temperature:		3.6	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01	Soil	4/27/2023	1035	1.0'	Comp	1	x	x	x
FS02	Soil	4/27/2023	1045	1.0'	Comp	1	x	x	x
FS03	Soil	4/27/2023	1105	1.0'	Comp	1	x	x	x
FS04	Soil	4/27/2023	1115	1.0'	Comp	1	x	x	x
FS05	Soil	4/27/2023	1120	1.0'	Comp	1	x	x	x

Pres. Code / Parameters / ANALYSIS REQUEST

Preservative Codes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/27/23 1425	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4587-1
SDG Number: 03D2024165

Login Number: 4587
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: 890-4587-1
SDG Number: 03D2024165

Login Number: 4587
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/01/23 08:43 AM

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] COG - Containment Inspection - Jazzmaster 17 State 003H (Incident Number nAPP2306543550)
Date: Wednesday, March 15, 2023 4:58:31 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, March 15, 2023 2:31 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COG - Containment Inspection - Jazzmaster 17 State 003H (Incident Number nAPP2306543550)

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

To Whom It May Concern,

Below is an email notification for liner inspection at COG Operating, LLC (COG) Jazzmaster 17 State 003H (Incident Number nAPP2306543550) / Spill Date 2-21-2023. This is a notification that Ensolum is scheduled to inspect this lined containment on behalf of COG on Monday, March 20, 2023. Please call with any questions or concerns.

GPS: 32.31106, -103.58743

Thank you,

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

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] Sampling Notification (Week of 3/20/2023)
Date: Wednesday, March 15, 2023 4:56:14 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, March 15, 2023 2:07 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] Sampling Notification (Week of 3/20/2023)

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

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following site the week of March 20, 2023.

- Jazzmaster 17 State 003H / NAPP2306543550
- Wilder 28-1 / NAPP2301736973
- Bufflehead 10 Federal 001H / NAPP2305139488

Thank you,

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

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 4/24/2023)
Date: Thursday, April 20, 2023 4:32:26 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, April 20, 2023 2:33 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 4/24/2023)

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 April 24, 2023.

- Bandit 15 Federal Com 002H / NAPP2307544597
  - Sampling Date: 4/24-26/2023 @ 10:00 AM MST

- Jazzmaster 17 ST 3H / NAPP2306543550
  - Sampling Date: 4/27/2023 @ 10:00 AM MST
- Treasure Island Federal 1H / NAPP2310337528
  - Sampling Date: 4/28/2023 @ 10:00 AM MST

Thank you,

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

ENSOLUM

APPENDIX E

Final C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAPP2306543550
District RP	
Facility ID	fAPP2203953771
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Charles Beauvais	Contact Telephone	(575) 988-2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # *(assigned by OCD)*	nAPP2306543550
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.3111 Longitude -103.5922

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Jazzmaster 17 State 003H	Site Type	Tank Battery
Date Release Discovered	February 21, 2023	API# *(if applicable)*	30-025-41426

Unit Letter	Section	Township	Range	County
B	17	23S	33E	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) 7.1	Volume Recovered (bbls) 4.2
■ Produced Water	Volume Released (bbls) 7.1	Volume Recovered (bbls) 4.2
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	■ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a gasket failure.
The release occurred within a falcon lined facility with overspray into pasture/pad. A vacuum truck was dispatched to remove all freestanding fluids. Evaluation will be made of the spill area for any possible impact from the release.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2306543550
District RP	
Facility ID	fAPP2203953771
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: 3/6/2023

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

OCD Only

Received by: Jocelyn Harimon Date: 03/06/2023

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.)	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.)	Total Estimated Contaminated Soil, uncompacted, 25% (yd^3.)	Current Rule of Thumb - RMR Handover Volume, (yd^3.)
Rectangle A	93.0	46.0	0.5	Off-Pad	15.02%	31.73	4.77	50%	2.38	2.38	8.25	750
Rectangle B						0.00					0.00	
Rectangle C						0.00					0.00	
Rectangle D						0.00					0.00	
Rectangle E						0.00					0.00	
Rectangle F						0.00					0.00	
Rectangle G						0.00					0.00	
Rectangle H						0.00					0.00	
Rectangle I						0.00					0.00	
Rectangle J						0.00					0.00	
					Total Subsurface Volume Released		4.7656		2.3828	2.3828	8.25	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

Action 193647

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 193647
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	3/6/2023

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2306543550
District RP	
Facility ID	fAPP2203953771
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2306543550
District RP	
Facility ID	fAPP2203953771
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: _____5/22/2023_____

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

OCD Only

Received by: ___Jocelyn Harimon_____ Date: ___05/23/2023___

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2306543550
District RP	
Facility ID	fAPP2203953771
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: Jacob Laird Title: Environmental Engineer

Signature: Jacob Laird Date: 5/22/2023

email: Jacob.Laird@conocophillips.com Telephone: 575-703-5482

OCD Only

Received by: Jocelyn Harimon 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: Nelson Velez Date: 05/23/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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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

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

CONDITIONS

Action 219014

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 219014
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/23/2023