ENSOLUM

December 20, 2022

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
Windward Federal CTB
Incident Number NAPP2235445306
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 site assessment and soil sampling activities performed at the Windward Federal CTB (Site). The purpose of the site assessment and soil sampling activities was to address impacts to soil resulting from a crude oil flare fire at the Site. Based on field observations, field screening activities, and laboratory analytical results from the soil sampling events, COG is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2235445306.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 30, Township 24 South, Range 32 East, in Lea County, New Mexico (32.195278° N, 103.718056° W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 30, 2022, a plug in the knockout water meter resulted in fluid being sent to the flare and resulted in a fire on pad. The released volume was estimated to be approximately 0.593 barrels (bbls) of crude oil. The released crude oil ignited and extinguished itself after reaching the ground. COG reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email on August 1, 2022 and submitted a Release Notification Form C-141 (Form C-141) on August 11, 2022. The release was assigned Incident Number NAPP2235445306.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, (19.15.29.12) 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. On September 15, 2022, borehole BH01 (New Mexico Office of the State Engineer (NMOSE) file number C-4665) was advanced to a depth of 120 feet bgs via air rotary drill rig. The borehole was located approximately 0.31 miles east of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow

infill of groundwater. After the 72-hour waiting period, groundwater was not observed and it was confirmed groundwater beneath the Site is greater than 120 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an freshwater pond, located approximately 5,596 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On August 11, 2022, Ensolum personnel visited the Site to evaluate the release extent and conduct Site assessment activities. Ensolum personnel collected seven soil samples (SS01 through SS07), collected at a depth of 0.5 feet bgs around and within the release extent, to assess the lateral extent of the release. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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 at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemical of concerns (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 preliminary soil samples SS02 and SS03, collected within the release extent, indicated all COC concentrations are compliant with the Site Closure Criteria. Laboratory analytical results for preliminary soil samples SS04 through SS07, collected around the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for preliminary soil samples SS01 indicated TPH concentrations exceeded the Site Closure Criteria. Based on visible staining in the release area and laboratory analytical results for preliminary soil sample SS01, delineation and excavation activities were warranted.

DELINEATION AND EXCAVATION SOIL SAMPLNG ACTIVITIES

On September 9, 2022, Ensolum personnel were at the Site to oversee delineation and excavation activities based on visible staining in the release area and laboratory analytical results for preliminary soil sample SS01. Boreholes BH01 through BH03 were advanced via backhoe within the release extent to assess the vertical extent. The boreholes were advanced to a depth of 2 feet bgs. Delineation soil samples were collected from each borehole at depths of 1-foot and 2 feet bgs. Soil from the boreholes was field screened for VOCs and chloride. Field screening results and observations for the boreholes were logged on lithologic soil sampling logs, which are included in Appendix B. The delineation soil sample locations are depicted on Figure 3.

Upon completion of delineation activities, stained soil was excavated from the release area as indicated by visible staining and laboratory analytical results for preliminary soil sample SS01. Excavation activities were performed using track-mounted backhoe and transport vehicles. The excavation occurred on pad. 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 C.

Following removal of the 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 FS08 were collected from the floor of the excavation at depths ranging from 0.5 feet to 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 4.

The excavation area measured approximately 1,600 square feet. A total of 54 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.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from boreholes BH01 and BH03 indicated all COC concentrations were compliant with the Site Closure Criteria.

Laboratory analytical results for excavation floor samples FS01 through FS08 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

CLOSURE REQUEST

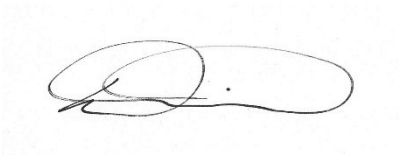
Site assessment and excavation activities were conducted at the Site to address the July 30, 2022, crude oil flare fire. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation was required. COG will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Excavation of stained soil has mitigated impacts at this Site. Depth to groundwater has been determined 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 NAPP2235445306.

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

Sincerely,
Ensolum, LLC

Kalei Jennings
Senior Project Manager



Daniel R. Moir, PG
Senior Managing Geologist

cc: Charles Beauvais, COG Operating, LLC
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic/Soil Sampling Log
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	Final C-141

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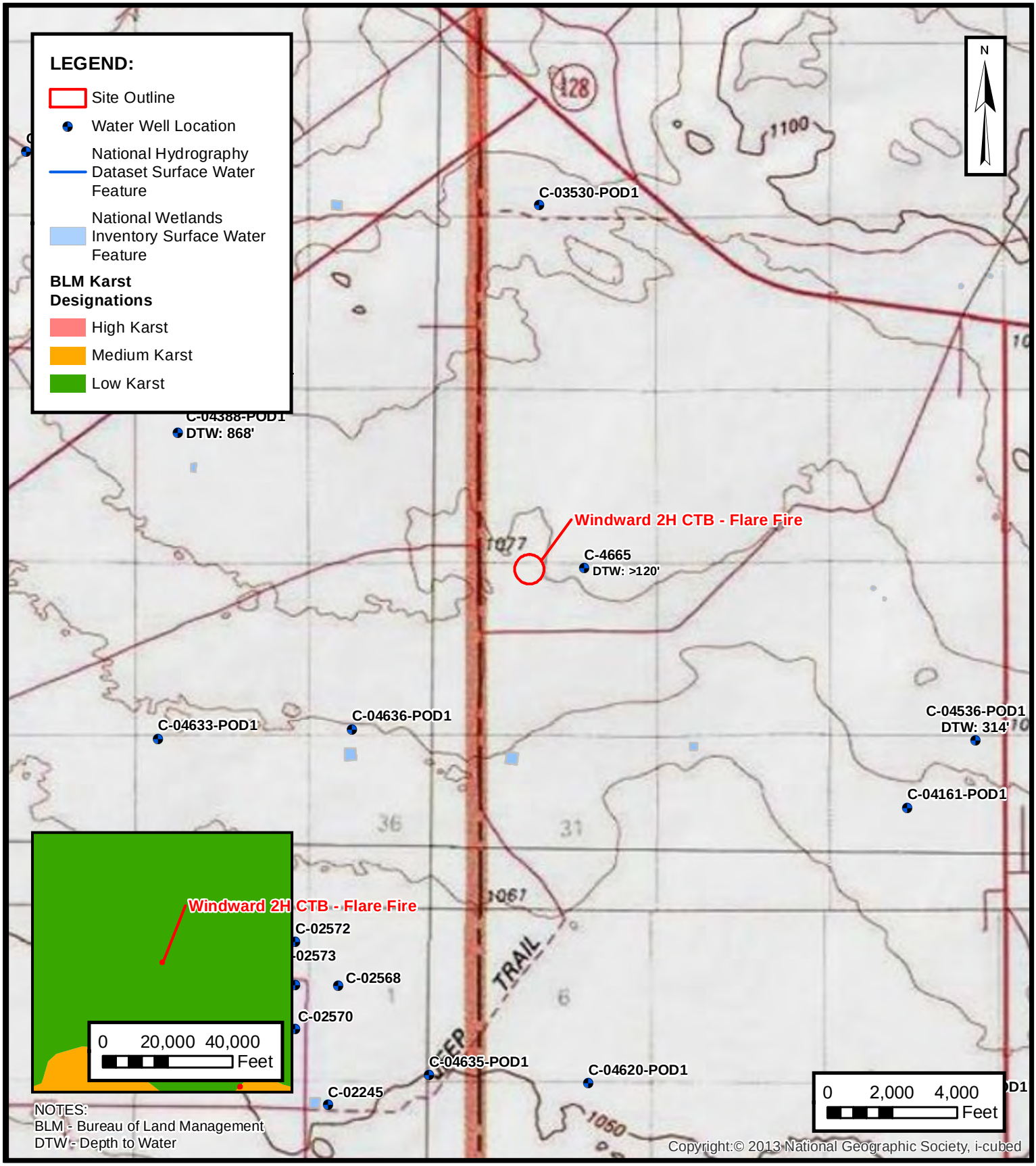
FIGURES



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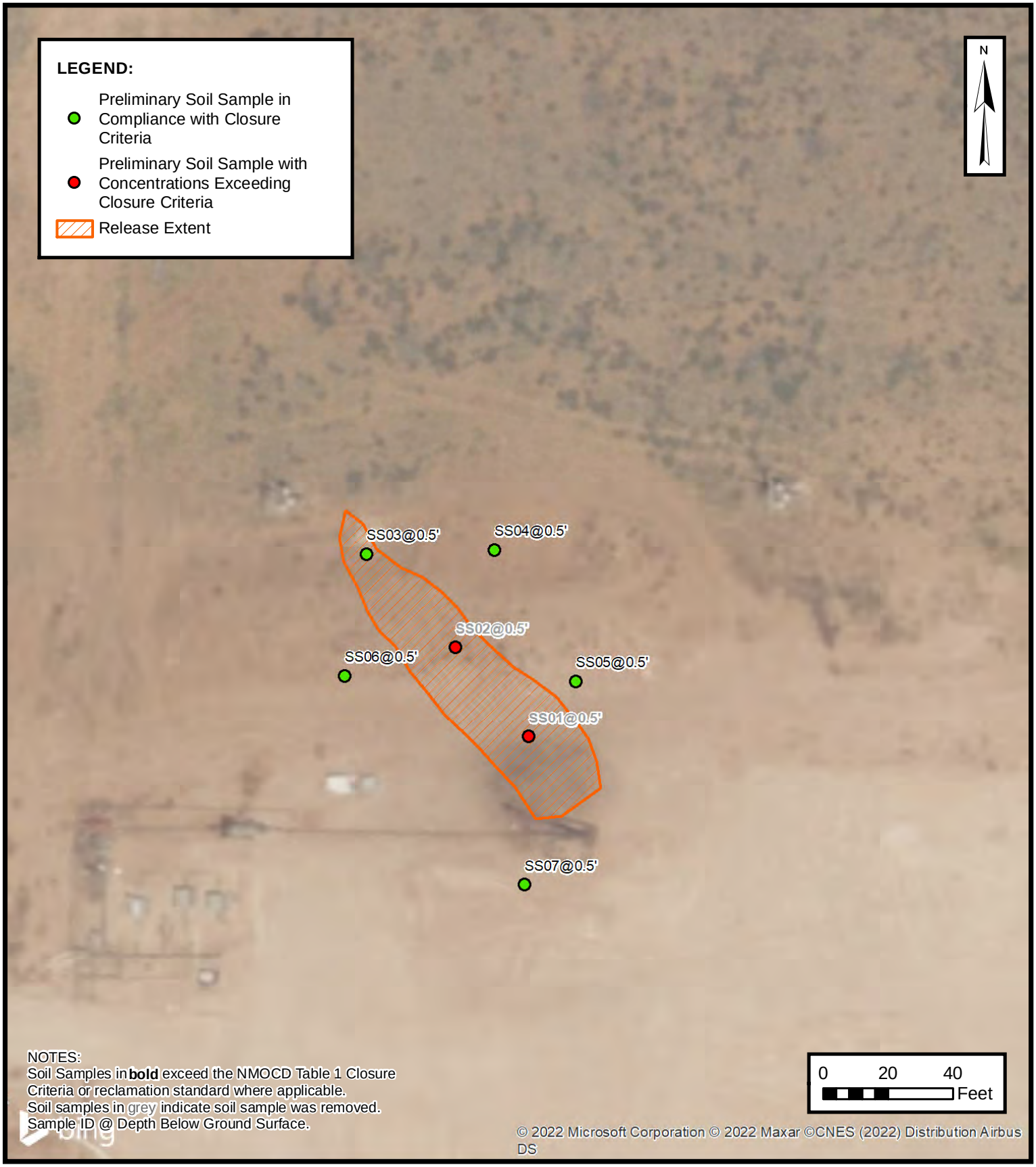
SITE RECEPTOR MAP

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE

1



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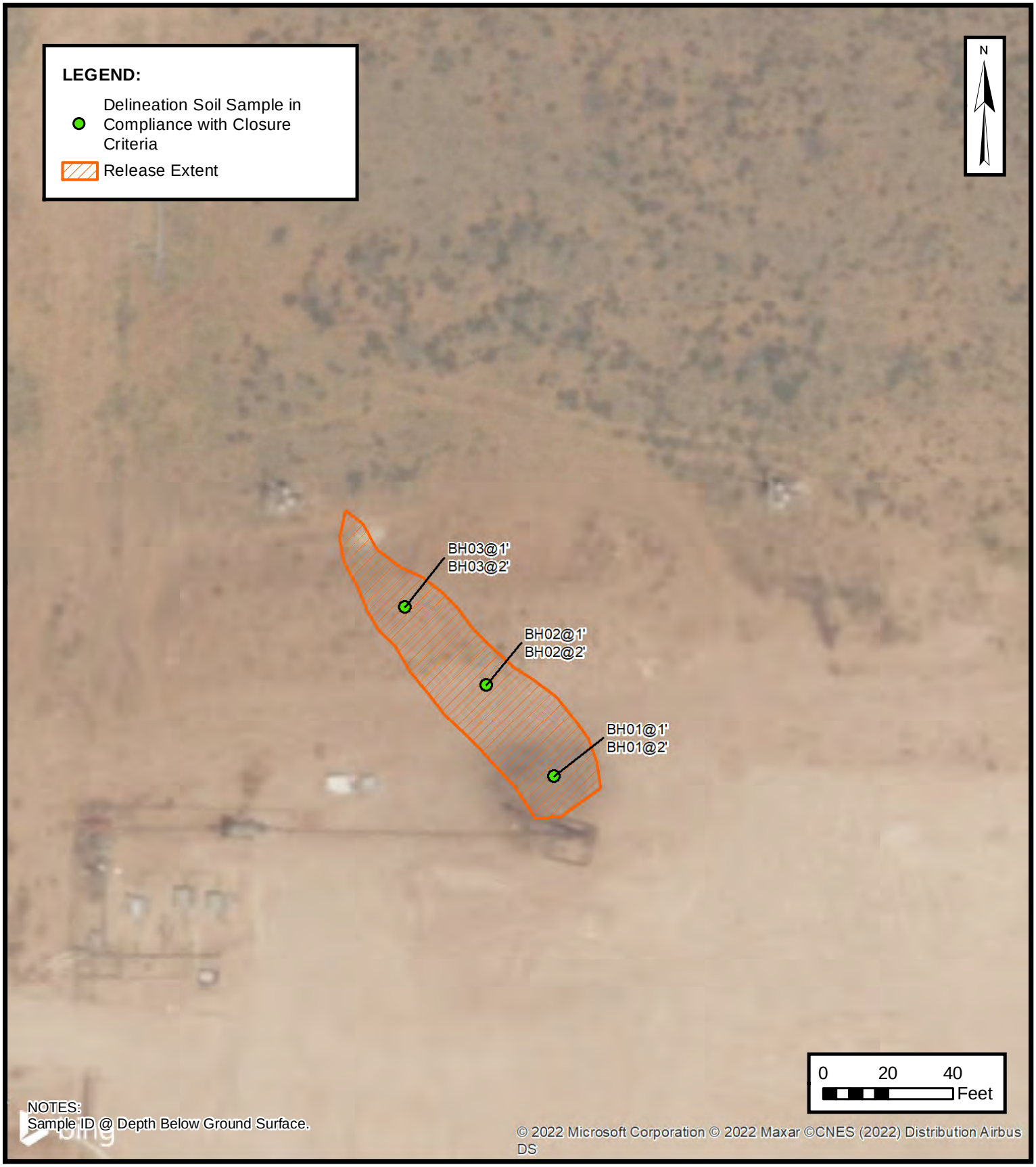
PRELIMINARY SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE
2



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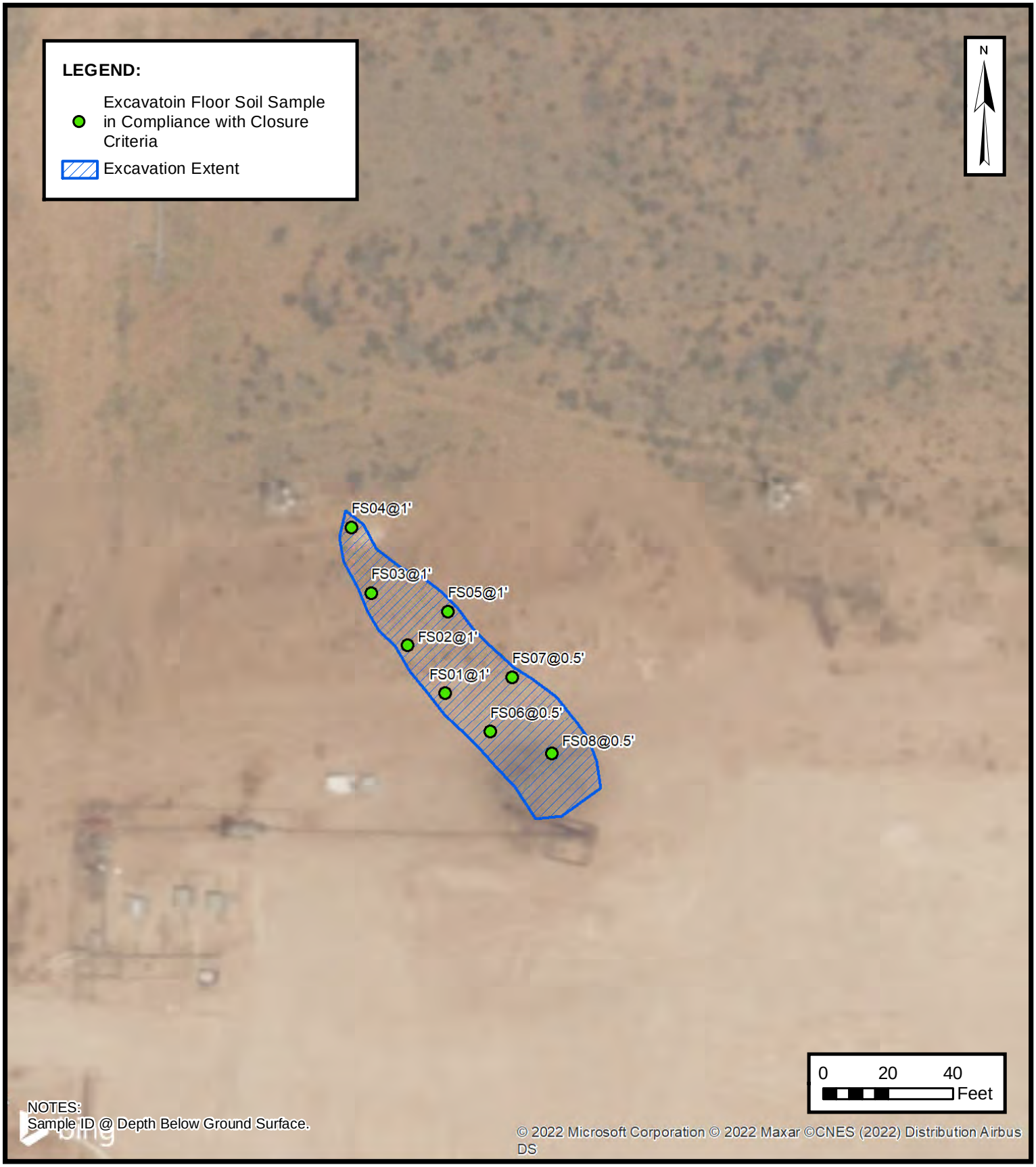
DELINEATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE
3



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EXCAVATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE
4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Windward 2H Flare Fire
ConocoPhillips Company
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Assessment Soil Samples										
SS01	08/11/2022	0.5	<0.00200	<0.00401	<50.0	2,010	874	**2,010**	**2,880**	23.0
SS02	08/11/2022	0.5	<0.00200	<0.00401	<49.9	1,060	706	**1,060**	1,770	211
SS03	08/11/2022	0.5	<0.00202	<0.00404	<50.0	65.2	78.3	65.2	144	53.9
SS04	08/11/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	55.8	<49.9	55.8	29.1
SS05	08/11/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	98.3	<50.0	98.3	206
SS06	08/11/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	56.9	<49.9	56.9	32.6
SS07	08/11/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	66.1
Delineation Soil Samples										
BH01	09/09/2022	1	<0.00200	<0.00401	<49.8	138	<49.8	138	138	9.13
	09/09/2022	2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	24.7
BH02	09/09/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	27.9
	09/09/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	25.3
BH03	09/09/2022	1	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	52.7
	09/09/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	70.8
Confirmation Soil Samples										
FS01	09/09/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	12.8
FS02	09/09/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	10.1
FS03	09/09/2022	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	8.74
FS04	09/09/2022	1	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	17.5
FS05	09/09/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	60.5
FS06	09/09/2022	0.5	<0.00200	<0.00401	<50.0	141	<50.0	141	141	33.1
FS07	09/09/2022	0.5	<0.00201	<0.00402	<49.9	931	<49.9	931	931	17.8
FS08	09/09/2022	0.5	<0.00200	<0.00399	<50.0	148	<50.0	148	148	21.3

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Sample results that have been greyed out have been excavated.

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APPENDIX A

Referenced Well Records

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Client: CONOCO PHILLIPS
Project Name: KING TUT FEDERAL 003H
Project Location: LEA COUNTY, NM
Project Manager: KALEI JENNINGS

BORING LOG NUMBER
BH01
Project No. 03D2024082

Date Sampled: 09/15/2022
Drilled by: WTWWS
Driller: RUSSELL SOUTHERLAND
Logged by: HADLIE GREEN
Sampler: HADLIE GREEN

Ground Surface Elevation: —
Top of Casing Elevation: —
North Coordinate: —
West Coordinate: —
Bench Mark Elevation: —
At Completion
At Well Stabilization

Borehole Diameter: 6"
Casing Diameter: —
Well Materials: —
Surface Completion: —
Boring Method: AIR ROTARY

DEPTH (ft)	SAMPLE INTERVAL	SAMPLE ID	RECOVERY (%)	FID/PID READING (ppm)	POTENTIOMETRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTION	BORING / WELL COMPLETION (GRAPHIC DEPICTION)
							pg. 1 of 2	
0						0' CCHE	CALICHE, light tan, fine to medium grain, up to 1" limestone clasts, slightly moist, no stain/odor.	
						10' SM	SILTY SAND, pinkish red, fine grain, 1-2 cm limestone clasts, well sorted, moderate grade, slightly consolidated, no stain/odor.	
20'								
40'						SM	SAA, reddish brown, trace limestone clasts (1-2 cm).	
60'						SM	SAA, abundant subrounded mud clasts up to 1".	
80'						SM	90': SAA, some green mud clasts (1-3 mm), slightly consolidated.	
100'								

ENSOLUM

Client: CONOCO PHILLIPS
Project Name: KING TUT FEDERAL 003H
Project Location: LEA COUNTY, NM
Project Manager: KALEI JENNINGS

BORING LOG NUMBER
BH01
Project No. 03D2024082

Date Sampled: 09/15/2022
Drilled by: WTWWS
Driller: RUSSELL SOUTHERLAND
Logged by: HADLIE GREEN
Sampler: HADLIE GREEN

Ground Surface Elevation:
Top of Casing Elevation:
North Coordinate:
West Coordinate:
Bench Mark Elevation:
At Completion
At Well Stabilization

Borehole Diameter: 6"
Casing Diameter: -
Well Materials:
Surface Completion: -
Boring Method: AIR ROTARY

DEPTH (ft)	SAMPLE INTERVAL	SAMPLE ID	RECOVERY (%)	FID/PID READING (ppm)	POTENTIOMETRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTION	BORING / WELL COMPLETION (GRAPHIC DEPICTION)
							pg. 2 of 2	
100'						SM	SILTY SAND, Reddish brown, fine grain, less mud clasts, No green mud clasts, well sorted, slightly consolidated, no stain / odor.	
120'							TD @ 120 feet bgs	

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
22333	C 04388 POD1	3	2	1	23	24S	31E	617546	3564006

Driller License: 1058 **Driller Company:** KEY'S DRILLING & PUMP SERVICE

Driller Name: KEY, GARYR.S AICHARDDENAS

Drill Start Date:	12/18/2019	**Drill Finish Date:**	02/22/2020	**Plug Date:**	
Log File Date:	02/27/2020	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	60 GPM
Casing Size:	4.50	**Depth Well:**	910 feet	**Depth Water:**	868 feet

Water Bearing Stratifications:	Top	Bottom	Description
	866	868	Limestone/Dolomite/Chalk

Casing Perforations:	Top	Bottom
	850	910

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APPENDIX B

Lithologic/Soil Sampling Log

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Sample Name: BH01	Date: 9-8-2022	
Site Name: Windward 2H		
Incident Number: nAPP2235445306		
Job Number: 03D2024080		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LC	Method: Pothole
Coordinates: 32.195554, -103.717726	Hole Diameter: N/A	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SM	Silty sand, brown and tan no odor, dry
D	<168	10.01	Y	BH01	1	1		
D	168	6.07	Y	BH01	2	2		TD: 2 feet bgs
						3		
						4		

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	Sample Name: BH02	Date: 9-8-2022
	Site Name: Windward 2H	
	Incident Number: nAPP2235445306	
	Job Number: 03D2024080	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LC	Method: Pothole
Coordinates: 32.195631, -103.717792	Hole Diameter: N/A	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SM	Silty sand, brown and tan no odor, dry
D	<168	0	N	BH02	1	1		
D	<168	0	N	BH02	2	2		TD: 2 feet bgs
						3		
						4		

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Sample Name: BH03	Date: 9-8-2022	
Site Name: Windward 2H		
Incident Number: nAPP2235445306		
Job Number: 03D2024080		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LC	Method: Pothole
Coordinates: 32.195696, -103.717873	Hole Diameter: N/A	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SM	Silty sand, brown and tan no odor, dry
D	168	0	N	BH03	1	1		
D	240.8	0	N	BH03	2	2		TD: 2 feet bgs
						3		
						4		

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APPENDIX C

Photographic Log

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Photographic Log
COG Operating, LLC
Windward 2H CTB - Flare
Incident Number nAPP2235445306

Photograph 1 Date: September 8, 2022
Description: Photo of release extent prior.

Photograph 2 Date: September 8, 2022
Description: Photo of release extent.

Photograph 3 Date: September 8, 2022
Description: Photo of release extent.

Photograph 4 Date: September 8, 2022
Description: Photo of release extent.

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APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2746-1
Laboratory Sample Delivery Group: 03D2024080
Client Project/Site: Windward 2H Flare Fire

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/25/2022 12:48:03 PM

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

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

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

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Laboratory Job ID: 890-2746-1
SDG: 03D2024080

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Job ID: 890-2746-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2746-1

Receipt
The samples were received on 8/11/2022 3:27 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-2746-1), (CCV 880-32557/20), (CCV 880-32557/33), (CCV 880-32557/51), (LCS 880-32561/1-A), (LCSD 880-32561/2-A), (MB 880-32546/5-A), (MB 880-32561/5-A), (880-18346-A-21-D MS) and (880-18346-A-21-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-18346-A-21-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32833 and analytical batch 880-32836 were outside control limits. Sample matrix interference and/or non-homogeneity are 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32175 and analytical batch 880-32121 were outside control limits. Sample matrix interference and/or non-homogeneity are 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.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32339 and analytical batch 880-32436 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS01

Lab Sample ID: 890-2746-1
Matrix: Solid
Date Collected: 08/11/22 11:05
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/20/22 10:39	08/21/22 09:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*156*	*S1+*	*70 - 130*	*08/20/22 10:39*	*08/21/22 09:10*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*08/20/22 10:39*	*08/21/22 09:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2880**		50.0		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 03:24	1
Diesel Range Organics (Over C10-C28)	**2010**		50.0		mg/Kg		08/15/22 13:57	08/16/22 03:24	1
Oil Range Organics (Over C28-C36)	**874**		50.0		mg/Kg		08/15/22 13:57	08/16/22 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:24*	*1*
o-Terphenyl	*100*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.0**		5.05		mg/Kg			08/19/22 01:35	1

Client Sample ID: SS02

Lab Sample ID: 890-2746-2
Matrix: Solid
Date Collected: 08/11/22 11:10
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
Toluene	**0.00208**		0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 08:28	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS02

Lab Sample ID: 890-2746-2
Matrix: Solid
Date Collected: 08/11/22 11:10
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:28*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1770**		49.9		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 03:44	1
Diesel Range Organics (Over C10-C28)	**1060**		49.9		mg/Kg		08/15/22 13:57	08/16/22 03:44	1
Oil Range Organics (Over C28-C36)	**706**		49.9		mg/Kg		08/15/22 13:57	08/16/22 03:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*92*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:44*	*1*
o-Terphenyl	*88*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**211**		4.98		mg/Kg			08/19/22 02:03	1

Client Sample ID: SS03

Lab Sample ID: 890-2746-3
Matrix: Solid
Date Collected: 08/11/22 11:15
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		08/24/22 10:17	08/25/22 08:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:49*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:49*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			08/22/22 10:17	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS03

Lab Sample ID: 890-2746-3
Matrix: Solid
Date Collected: 08/11/22 11:15
Date Received: 08/11/22 15:27
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**144**		50.0		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 00:03	1
Diesel Range Organics (Over C10-C28)	**65.2**		50.0		mg/Kg		08/15/22 13:57	08/16/22 00:03	1
Oil Range Organics (Over C28-C36)	**78.3**		50.0		mg/Kg		08/15/22 13:57	08/16/22 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:03*	*1*
o-Terphenyl	*95*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.9**		4.98		mg/Kg			08/19/22 02:12	1

Client Sample ID: SS04

Lab Sample ID: 890-2746-4
Matrix: Solid
Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
Toluene	**0.00268**		0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/24/22 10:17	08/25/22 09:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:09*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:09*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**55.8**		49.9		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 00:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 00:23	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS04

Lab Sample ID: 890-2746-4
Matrix: Solid
Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	**55.8**		49.9		mg/Kg		08/15/22 13:57	08/16/22 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:23*	*1*
o-Terphenyl	*89*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29.1**		4.95		mg/Kg			08/19/22 02:21	1

Client Sample ID: SS05

Lab Sample ID: 890-2746-5
Matrix: Solid
Date Collected: 08/11/22 11:25
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/24/22 10:17	08/25/22 09:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:29*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**98.3**		50.0		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 00:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 00:43	1
Oil Range Organics (Over C28-C36)	**98.3**		50.0		mg/Kg		08/15/22 13:57	08/16/22 00:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:43*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS05

Lab Sample ID: 890-2746-5
Matrix: Solid
Date Collected: 08/11/22 11:25
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**206**		4.99		mg/Kg			08/19/22 02:30	1

Client Sample ID: SS06

Lab Sample ID: 890-2746-6
Matrix: Solid
Date Collected: 08/11/22 11:30
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 09:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:50*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:50*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**56.9**		49.9		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 01:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 01:03	1
Oil Range Organics (Over C28-C36)	**56.9**		49.9		mg/Kg		08/15/22 13:57	08/16/22 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/15/22 13:57*	*08/16/22 01:03*	*1*
o-Terphenyl	*85*		*70 - 130*	*08/15/22 13:57*	*08/16/22 01:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.6**		5.00		mg/Kg			08/19/22 02:39	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS07

Date Collected: 08/11/22 11:35
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Lab Sample ID: 890-2746-7

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/24/22 10:17	08/25/22 10:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*08/24/22 10:17*	*08/25/22 10:10*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/24/22 10:17*	*08/25/22 10:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/22/22 10:17	1

Method: 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			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/15/22 13:57	08/16/22 02:44	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/15/22 13:57	08/16/22 02:44	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/15/22 13:57	08/16/22 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/15/22 13:57*	*08/16/22 02:44*	*1*
o-Terphenyl	*89*		*70 - 130*	*08/15/22 13:57*	*08/16/22 02:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**66.1**		4.95		mg/Kg			08/19/22 02:49	1

Surrogate Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-18346-A-21-D MS	Matrix Spike	202 S1+	95
880-18346-A-21-E MSD	Matrix Spike Duplicate	207 S1+	100
890-2746-1	SS01	156 S1+	112
890-2746-2	SS02	76	116
890-2746-3	SS03	87	110
890-2746-4	SS04	91	101
890-2746-5	SS05	95	100
890-2746-6	SS06	93	100
890-2746-7	SS07	90	102
890-2795-A-4-D MS	Matrix Spike	105	103
890-2795-A-4-E MSD	Matrix Spike Duplicate	98	102
LCS 880-32561/1-A	Lab Control Sample	209 S1+	99
LCS 880-32833/1-A	Lab Control Sample	93	95
LCSD 880-32561/2-A	Lab Control Sample Dup	196 S1+	97
LCSD 880-32833/2-A	Lab Control Sample Dup	99	101
MB 880-32546/5-A	Method Blank	137 S1+	70
MB 880-32561/5-A	Method Blank	152 S1+	70
MB 880-32772/5-A	Method Blank	79	118
MB 880-32833/5-A	Method Blank	81	120

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)
880-18072-A-1-B MS	Matrix Spike	79	80
880-18072-A-1-C MSD	Matrix Spike Duplicate	80	79
890-2746-1	SS01	97	100
890-2746-2	SS02	92	88
890-2746-3	SS03	91	95
890-2746-4	SS04	90	89
890-2746-5	SS05	88	94
890-2746-6	SS06	86	85
890-2746-7	SS07	86	89
LCS 880-32175/2-A	Lab Control Sample	123	125
LCSD 880-32175/3-A	Lab Control Sample Dup	110	115
MB 880-32175/1-A	Method Blank	89	98

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-32546/5-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32546

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/19/22 19:05	08/20/22 13:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*08/19/22 19:05*	*08/20/22 13:06*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*08/19/22 19:05*	*08/20/22 13:06*	*1*

Lab Sample ID: MB 880-32561/5-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32561

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/20/22 10:39	08/21/22 02:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*08/20/22 10:39*	*08/21/22 02:38*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*08/20/22 10:39*	*08/21/22 02:38*	*1*

Lab Sample ID: LCS 880-32561/1-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32561

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1162		mg/Kg		116	70 - 130		
Toluene			0.100	0.1167		mg/Kg		117	70 - 130		
Ethylbenzene			0.100	0.1229		mg/Kg		123	70 - 130		
m-Xylene & p-Xylene			0.200	0.2462		mg/Kg		123	70 - 130		
o-Xylene			0.100	0.1247		mg/Kg		125	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*209*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-32561/2-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32561

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1228		mg/Kg		123	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: LCSD 880-32561/2-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32561

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1197		mg/Kg		120	70 - 130	3	35
Ethylbenzene			0.100	0.1226		mg/Kg		123	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2445		mg/Kg		122	70 - 130	1	35
o-Xylene			0.100	0.1236		mg/Kg		124	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*196*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-18346-A-21-D MS
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32561

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000402	U	0.0998	0.1219		mg/Kg		122	70 - 130
Toluene	<0.000402	U	0.0998	0.1183		mg/Kg		119	70 - 130
Ethylbenzene	<0.000402	U	0.0998	0.1246		mg/Kg		125	70 - 130
m-Xylene & p-Xylene	<0.000805	U	0.200	0.2501		mg/Kg		125	70 - 130
o-Xylene	<0.000402	U	0.0998	0.1235		mg/Kg		123	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*202*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-18346-A-21-E MSD
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32561

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.000402	U	0.100	0.1204		mg/Kg		120	70 - 130	1	35
Toluene	<0.000402	U	0.100	0.1173		mg/Kg		117	70 - 130	1	35
Ethylbenzene	<0.000402	U	0.100	0.1207		mg/Kg		120	70 - 130	3	35
m-Xylene & p-Xylene	<0.000805	U	0.200	0.2380		mg/Kg		119	70 - 130	5	35
o-Xylene	<0.000402	U	0.100	0.1215		mg/Kg		121	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*207*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 880-32772/5-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32772

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/23/22 10:42	08/24/22 14:51	1

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: MB 880-32772/5-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32772

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/23/22 10:42	08/24/22 14:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*08/23/22 10:42*	*08/24/22 14:51*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*08/23/22 10:42*	*08/24/22 14:51*	*1*

Lab Sample ID: MB 880-32833/5-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32833

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/24/22 10:17	08/25/22 02:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*08/24/22 10:17*	*08/25/22 02:46*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*08/24/22 10:17*	*08/25/22 02:46*	*1*

Lab Sample ID: LCS 880-32833/1-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32833

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08613		mg/Kg		86	70 - 130		
Toluene			0.100	0.09677		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.09345		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1748		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.09368		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-32833/2-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32833

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09646		mg/Kg		96	70 - 130	11	35
Toluene			0.100	0.1048		mg/Kg		105	70 - 130	8	35
Ethylbenzene			0.100	0.1015		mg/Kg		101	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1862		mg/Kg		93	70 - 130	6	35
o-Xylene			0.100	0.09933		mg/Kg		99	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-2795-A-4-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32836 — **Prep Batch: 32833**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1	0.100	0.09197		mg/Kg		92	70 - 130
Toluene	<0.00201	U F1	0.100	0.07107		mg/Kg		71	70 - 130
Ethylbenzene	<0.00201	U F1	0.100	0.07605		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.201	0.1360	F1	mg/Kg		68	70 - 130
o-Xylene	<0.00201	U	0.100	0.09272		mg/Kg		92	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-2795-A-4-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32836 — **Prep Batch: 32833**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0998	0.06774	F1	mg/Kg		68	70 - 130	30	35
Toluene	<0.00201	U F1	0.0998	0.05943	F1	mg/Kg		60	70 - 130	18	35
Ethylbenzene	<0.00201	U F1	0.0998	0.06184	F1	mg/Kg		62	70 - 130	21	35
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1129	F1	mg/Kg		57	70 - 130	19	35
o-Xylene	<0.00201	U	0.0998	0.07382		mg/Kg		74	70 - 130	23	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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

Lab Sample ID: MB 880-32175/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32121 — **Prep Batch: 32175**

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		08/15/22 13:57	08/15/22 20:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/15/22 13:57	08/15/22 20:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/15/22 13:57	08/15/22 20:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	08/15/22 13:57	08/15/22 20:31	1
o-Terphenyl	98		70 - 130	08/15/22 13:57	08/15/22 20:31	1

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: LCS 880-32175/2-A
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32175

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	986.1		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1108		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*125*		*70 - 130*

Lab Sample ID: LCSD 880-32175/3-A
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32175

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	960.2		mg/Kg		96	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1017		mg/Kg		102	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: 880-18072-A-1-B MS
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32175

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	953.5		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	690.5	F1	mg/Kg		69	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Lab Sample ID: 880-18072-A-1-C MSD
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32175

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	968.8		mg/Kg		97	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	698.1		mg/Kg		70	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: 880-18072-A-1-C MSD
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32175

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	79		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-32339/1-A
Matrix: Solid
Analysis Batch: 32436

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			08/18/22 22:22	1

Lab Sample ID: LCS 880-32339/2-A
Matrix: Solid
Analysis Batch: 32436

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-32339/3-A
Matrix: Solid
Analysis Batch: 32436

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	243.2		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 880-17981-A-1-C MS
Matrix: Solid
Analysis Batch: 32436

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	855	F1	248	1192	F1	mg/Kg		136	90 - 110		

Lab Sample ID: 880-17981-A-1-D MSD
Matrix: Solid
Analysis Batch: 32436

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	855	F1	248	1138	F1	mg/Kg		114	90 - 110	5	20

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

GC VOA

Prep Batch: 32546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-32546/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 32557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8021B	32561
MB 880-32546/5-A	Method Blank	Total/NA	Solid	8021B	32546
MB 880-32561/5-A	Method Blank	Total/NA	Solid	8021B	32561
LCS 880-32561/1-A	Lab Control Sample	Total/NA	Solid	8021B	32561
LCSD 880-32561/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32561
880-18346-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	32561
880-18346-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32561

Prep Batch: 32561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	5035	
MB 880-32561/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32561/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32561/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-18346-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
880-18346-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 32623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	Total BTEX	
890-2746-2	SS02	Total/NA	Solid	Total BTEX	
890-2746-3	SS03	Total/NA	Solid	Total BTEX	
890-2746-4	SS04	Total/NA	Solid	Total BTEX	
890-2746-5	SS05	Total/NA	Solid	Total BTEX	
890-2746-6	SS06	Total/NA	Solid	Total BTEX	
890-2746-7	SS07	Total/NA	Solid	Total BTEX	

Prep Batch: 32772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-32772/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 32833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-2	SS02	Total/NA	Solid	5035	
890-2746-3	SS03	Total/NA	Solid	5035	
890-2746-4	SS04	Total/NA	Solid	5035	
890-2746-5	SS05	Total/NA	Solid	5035	
890-2746-6	SS06	Total/NA	Solid	5035	
890-2746-7	SS07	Total/NA	Solid	5035	
MB 880-32833/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32833/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32833/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2795-A-4-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2795-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

GC VOA

Analysis Batch: 32836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-2	SS02	Total/NA	Solid	8021B	32833
890-2746-3	SS03	Total/NA	Solid	8021B	32833
890-2746-4	SS04	Total/NA	Solid	8021B	32833
890-2746-5	SS05	Total/NA	Solid	8021B	32833
890-2746-6	SS06	Total/NA	Solid	8021B	32833
890-2746-7	SS07	Total/NA	Solid	8021B	32833
MB 880-32772/5-A	Method Blank	Total/NA	Solid	8021B	32772
MB 880-32833/5-A	Method Blank	Total/NA	Solid	8021B	32833
LCS 880-32833/1-A	Lab Control Sample	Total/NA	Solid	8021B	32833
LCSD 880-32833/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32833
890-2795-A-4-D MS	Matrix Spike	Total/NA	Solid	8021B	32833
890-2795-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32833

GC Semi VOA

Analysis Batch: 32121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8015B NM	32175
890-2746-2	SS02	Total/NA	Solid	8015B NM	32175
890-2746-3	SS03	Total/NA	Solid	8015B NM	32175
890-2746-4	SS04	Total/NA	Solid	8015B NM	32175
890-2746-5	SS05	Total/NA	Solid	8015B NM	32175
890-2746-6	SS06	Total/NA	Solid	8015B NM	32175
890-2746-7	SS07	Total/NA	Solid	8015B NM	32175
MB 880-32175/1-A	Method Blank	Total/NA	Solid	8015B NM	32175
LCS 880-32175/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32175
LCSD 880-32175/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32175
880-18072-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	32175
880-18072-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32175

Prep Batch: 32175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8015NM Prep	
890-2746-2	SS02	Total/NA	Solid	8015NM Prep	
890-2746-3	SS03	Total/NA	Solid	8015NM Prep	
890-2746-4	SS04	Total/NA	Solid	8015NM Prep	
890-2746-5	SS05	Total/NA	Solid	8015NM Prep	
890-2746-6	SS06	Total/NA	Solid	8015NM Prep	
890-2746-7	SS07	Total/NA	Solid	8015NM Prep	
MB 880-32175/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32175/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32175/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-18072-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-18072-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 32213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8015 NM	
890-2746-2	SS02	Total/NA	Solid	8015 NM	
890-2746-3	SS03	Total/NA	Solid	8015 NM	
890-2746-4	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

GC Semi VOA (Continued)

Analysis Batch: 32213 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-5	SS05	Total/NA	Solid	8015 NM	
890-2746-6	SS06	Total/NA	Solid	8015 NM	
890-2746-7	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 32339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Soluble	Solid	DI Leach	
890-2746-2	SS02	Soluble	Solid	DI Leach	
890-2746-3	SS03	Soluble	Solid	DI Leach	
890-2746-4	SS04	Soluble	Solid	DI Leach	
890-2746-5	SS05	Soluble	Solid	DI Leach	
890-2746-6	SS06	Soluble	Solid	DI Leach	
890-2746-7	SS07	Soluble	Solid	DI Leach	
MB 880-32339/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32339/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32339/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17981-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17981-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 32436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Soluble	Solid	300.0	32339
890-2746-2	SS02	Soluble	Solid	300.0	32339
890-2746-3	SS03	Soluble	Solid	300.0	32339
890-2746-4	SS04	Soluble	Solid	300.0	32339
890-2746-5	SS05	Soluble	Solid	300.0	32339
890-2746-6	SS06	Soluble	Solid	300.0	32339
890-2746-7	SS07	Soluble	Solid	300.0	32339
MB 880-32339/1-A	Method Blank	Soluble	Solid	300.0	32339
LCS 880-32339/2-A	Lab Control Sample	Soluble	Solid	300.0	32339
LCSD 880-32339/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32339
880-17981-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	32339
880-17981-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32339

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS01
Date Collected: 08/11/22 11:05
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-1
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	32561	08/20/22 10:39	MR	EET MID
Total/NA	Analysis	8021B		1			32557	08/21/22 09:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 03:24	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 01:35	CH	EET MID

Client Sample ID: SS02
Date Collected: 08/11/22 11:10
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 08:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 03:44	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:03	CH	EET MID

Client Sample ID: SS03
Date Collected: 08/11/22 11:15
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 08:49	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 00:03	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:12	CH	EET MID

Client Sample ID: SS04
Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-4
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	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 09:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS04

Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-4
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			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 00:23	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:21	CH	EET MID

Client Sample ID: SS05

Date Collected: 08/11/22 11:25
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-5
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	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 09:29	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 00:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:30	CH	EET MID

Client Sample ID: SS06

Date Collected: 08/11/22 11:30
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-6
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			4.99 g	5 mL	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 09:50	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 01:03	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:39	CH	EET MID

Client Sample ID: SS07

Date Collected: 08/11/22 11:35
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-7
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	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 10:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 02:44	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS07
Date Collected: 08/11/22 11:35
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-7
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			5.05 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:49	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: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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	T104704400-22-24	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: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2746-1	SS01	Solid	08/11/22 11:05	08/11/22 15:27	0.5
890-2746-2	SS02	Solid	08/11/22 11:10	08/11/22 15:27	0.5
890-2746-3	SS03	Solid	08/11/22 11:15	08/11/22 15:27	0.5
890-2746-4	SS04	Solid	08/11/22 11:20	08/11/22 15:27	0.5
890-2746-5	SS05	Solid	08/11/22 11:25	08/11/22 15:27	0.5
890-2746-6	SS06	Solid	08/11/22 11:30	08/11/22 15:27	0.5
890-2746-7	SS07	Solid	08/11/22 11:35	08/11/22 15:27	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
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:	817-683-2503	Email:	kjennings@ensolum.com

Work Order Comments

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

Project Name:	Windward 2H Flare Fire	**Turn Around**	
Project Number:	03D2024080	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Conner Shore	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:	NM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.6
Total Containers:		Corrected Temperature:	5.4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	S	08.11.22	1105	0.5'	G	1	x	x	x
SS02	S	08.11.22	1110	0.5'	G	1	x	x	x
SS03	S	08.11.22	1115	0.5'	G	1	x	x	x
SS04	S	08.11.22	1120	0.5'	G	1	x	x	x
SS05	S	08.11.22	1125	0.5'	G	1	x	x	x
SS06	S	08.11.22	1130	0.5'	G	1	x	x	x
SS07	S	08.11.22	1135	0.5'	G	1	x	x	x

890-2746 Chain of Custody

Preservative Codes

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

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		8.1.22 1527			
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2746-1
SDG Number: 03D2024080

Login Number: 2746
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2746-1
SDG Number: 03D2024080

Login Number: 2746
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/15/22 08:36 AM

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

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2910-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Windward 2H

For:
Ensolum
2351 W. Northwest Hwy
Suite 1203
Dallas, Texas 75220

Attn: Joe Gable

JKramer

Authorized for release by:
9/21/2022 5:14:19 PM

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

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

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

Client: Ensolum
Project/Site: Windward 2H

Laboratory Job ID: 890-2910-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Job ID: 890-2910-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2910-1

Receipt
The samples were received on 9/9/2022 9:22 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-34858 and analytical batch 880-34895 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA
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: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-2910-1

Date Collected: 09/09/22 10:00
Matrix: Solid
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/19/22 15:06	09/21/22 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:25*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/21/22 15:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**138**		49.8		mg/Kg			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/13/22 08:23	09/13/22 15:20	1
Diesel Range Organics (Over C10-C28)	**138**		49.8		mg/Kg		09/13/22 08:23	09/13/22 15:20	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/13/22 08:23	09/13/22 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:20*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.13**		4.97		mg/Kg			09/14/22 09:56	1

Client Sample ID: BH01

Lab Sample ID: 890-2910-2

Date Collected: 09/09/22 10:05
Matrix: Solid
Date Received: 09/09/22 09:22
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/19/22 15:06	09/21/22 08:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:45*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-2910-2
Matrix: Solid

Date Collected: 09/09/22 10:05
Date Received: 09/09/22 09:22
Sample Depth: 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			09/21/22 15:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/13/22 08:23	09/13/22 15:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/13/22 08:23	09/13/22 15:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/13/22 08:23	09/13/22 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:41*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:41*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24.7**		4.99	mg/Kg			09/14/22 10:01	1

Client Sample ID: BH02

Lab Sample ID: 890-2910-3
Matrix: Solid

Date Collected: 09/09/22 10:10
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/19/22 15:06	09/21/22 10:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:36*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH02

Lab Sample ID: 890-2910-3
Matrix: Solid
Date Collected: 09/09/22 10:10
Date Received: 09/09/22 09:22
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:02*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.9**		5.03		mg/Kg			09/14/22 10:05	1

Client Sample ID: BH02

Lab Sample ID: 890-2910-4
Matrix: Solid
Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 10:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:56*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:22*	*1*
o-Terphenyl	*98*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:22*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH02

Lab Sample ID: 890-2910-4
Matrix: Solid
Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22
Sample Depth: 2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.3		5.01		mg/Kg			09/14/22 10:10	1

Client Sample ID: BH03

Lab Sample ID: 890-2910-5
Matrix: Solid
Date Collected: 09/09/22 10:20
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/19/22 15:06	09/21/22 11:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:17*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:17*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:43*	*1*
o-Terphenyl	*97*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.7		4.99		mg/Kg			09/14/22 10:15	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH03

Date Collected: 09/09/22 10:30
Date Received: 09/09/22 09:22
Sample Depth: 2

Lab Sample ID: 890-2910-6

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 11:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:37*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 17:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 17:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:04*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.8**		4.98		mg/Kg			09/14/22 10:20	1

Surrogate Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-19019-A-1-E MS	Matrix Spike	117	114
880-19019-A-1-F MSD	Matrix Spike Duplicate	92	112
890-2910-1	BH01	82	116
890-2910-2	BH01	101	108
890-2910-3	BH02	96	110
890-2910-4	BH02	90	112
890-2910-5	BH03	100	117
890-2910-6	BH03	85	110
LCS 880-34858/1-A	Lab Control Sample	91	102
LCSD 880-34858/2-A	Lab Control Sample Dup	94	103
MB 880-34692/5-A	Method Blank	102	116
MB 880-34858/5-A	Method Blank	104	116

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)
890-2910-1	BH01	98	102
890-2910-2	BH01	100	102
890-2910-3	BH02	102	106
890-2910-4	BH02	93	98
890-2910-5	BH03	93	97
890-2910-6	BH03	92	94
890-2914-A-1-D MS	Matrix Spike	91	87
890-2914-A-1-E MSD	Matrix Spike Duplicate	95	91
LCS 880-34341/2-A	Lab Control Sample	74	84
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88
MB 880-34341/1-A	Method Blank	102	114

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34692/5-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34692

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/16/22 16:15*	*09/20/22 17:37*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/16/22 16:15*	*09/20/22 17:37*	*1*

Lab Sample ID: MB 880-34858/5-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34858

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 15:06	09/21/22 05:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/19/22 15:06*	*09/21/22 05:13*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/19/22 15:06*	*09/21/22 05:13*	*1*

Lab Sample ID: LCS 880-34858/1-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34858

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09802		mg/Kg		98	70 - 130		
Toluene			0.100	0.08583		mg/Kg		86	70 - 130		
Ethylbenzene			0.100	0.08534		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1780		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.08903		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-34858/2-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34858

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09393		mg/Kg		94	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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

Lab Sample ID: LCSD 880-34858/2-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34858

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08451		mg/Kg		85	70 - 130	2	35
Ethylbenzene			0.100	0.08316		mg/Kg		83	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1731		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.08797		mg/Kg		88	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-19019-A-1-E MS
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34858

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F2 F1	0.0998	0.04876	F1	mg/Kg		49	70 - 130
Toluene	<0.00201	U F2 F1	0.0998	0.04594	F1	mg/Kg		46	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.0998	0.04536	F1	mg/Kg		45	70 - 130
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.200	0.09537	F1	mg/Kg		48	70 - 130
o-Xylene	<0.00201	U F2 F1	0.0998	0.05511	F1	mg/Kg		55	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-19019-A-1-F MSD
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34858

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F2 F1	0.0990	0.1026	F2	mg/Kg		104	70 - 130	71	35
Toluene	<0.00201	U F2 F1	0.0990	0.08240	F2	mg/Kg		83	70 - 130	57	35
Ethylbenzene	<0.00201	U F2 F1	0.0990	0.07768	F2	mg/Kg		78	70 - 130	53	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.198	0.1614	F2	mg/Kg		82	70 - 130	51	35
o-Xylene	<0.00201	U F2 F1	0.0990	0.08266	F2	mg/Kg		83	70 - 130	40	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-34341/1-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34341

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		09/13/22 08:23	09/13/22 09:38	1

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-34341/1-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34341

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		09/13/22 08:23	09/13/22 09:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*

Lab Sample ID: LCS 880-34341/2-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34341

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	948.0		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	846.8		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-34341/3-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34341

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	893.7		mg/Kg		89	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	800.1		mg/Kg		80	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 890-2914-A-1-D MS
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34341

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	996	827.2		mg/Kg		80	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	738.7		mg/Kg		74	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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

Lab Sample ID: 890-2914-A-1-E MSD
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34341

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	867.5		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	783.4		mg/Kg		78	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34104/1-A
Matrix: Solid
Analysis Batch: 34474

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			09/14/22 08:57	1

Lab Sample ID: LCS 880-34104/2-A
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	238.3		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-34104/3-A
Matrix: Solid
Analysis Batch: 34474

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	238.8		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-2910-6 MS
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	70.8		249	319.6		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2910-6 MSD
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	70.8		249	319.0		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

GC VOA

Prep Batch: 34692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34692/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	5035	
890-2910-2	BH01	Total/NA	Solid	5035	
890-2910-3	BH02	Total/NA	Solid	5035	
890-2910-4	BH02	Total/NA	Solid	5035	
890-2910-5	BH03	Total/NA	Solid	5035	
890-2910-6	BH03	Total/NA	Solid	5035	
MB 880-34858/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-19019-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-19019-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8021B	34858
890-2910-2	BH01	Total/NA	Solid	8021B	34858
890-2910-3	BH02	Total/NA	Solid	8021B	34858
890-2910-4	BH02	Total/NA	Solid	8021B	34858
890-2910-5	BH03	Total/NA	Solid	8021B	34858
890-2910-6	BH03	Total/NA	Solid	8021B	34858
MB 880-34692/5-A	Method Blank	Total/NA	Solid	8021B	34692
MB 880-34858/5-A	Method Blank	Total/NA	Solid	8021B	34858
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	8021B	34858
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34858
880-19019-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	34858
880-19019-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34858

Analysis Batch: 35087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	Total BTEX	
890-2910-2	BH01	Total/NA	Solid	Total BTEX	
890-2910-3	BH02	Total/NA	Solid	Total BTEX	
890-2910-4	BH02	Total/NA	Solid	Total BTEX	
890-2910-5	BH03	Total/NA	Solid	Total BTEX	
890-2910-6	BH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8015B NM	34341
890-2910-2	BH01	Total/NA	Solid	8015B NM	34341
890-2910-3	BH02	Total/NA	Solid	8015B NM	34341
890-2910-4	BH02	Total/NA	Solid	8015B NM	34341
890-2910-5	BH03	Total/NA	Solid	8015B NM	34341
890-2910-6	BH03	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

GC Semi VOA (Continued)

Analysis Batch: 34338 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	34341
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8015NM Prep	
890-2910-2	BH01	Total/NA	Solid	8015NM Prep	
890-2910-3	BH02	Total/NA	Solid	8015NM Prep	
890-2910-4	BH02	Total/NA	Solid	8015NM Prep	
890-2910-5	BH03	Total/NA	Solid	8015NM Prep	
890-2910-6	BH03	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8015 NM	
890-2910-2	BH01	Total/NA	Solid	8015 NM	
890-2910-3	BH02	Total/NA	Solid	8015 NM	
890-2910-4	BH02	Total/NA	Solid	8015 NM	
890-2910-5	BH03	Total/NA	Solid	8015 NM	
890-2910-6	BH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Soluble	Solid	DI Leach	
890-2910-2	BH01	Soluble	Solid	DI Leach	
890-2910-3	BH02	Soluble	Solid	DI Leach	
890-2910-4	BH02	Soluble	Solid	DI Leach	
890-2910-5	BH03	Soluble	Solid	DI Leach	
890-2910-6	BH03	Soluble	Solid	DI Leach	
MB 880-34104/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2910-6 MS	BH03	Soluble	Solid	DI Leach	
890-2910-6 MSD	BH03	Soluble	Solid	DI Leach	

Analysis Batch: 34474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Soluble	Solid	300.0	34104
890-2910-2	BH01	Soluble	Solid	300.0	34104
890-2910-3	BH02	Soluble	Solid	300.0	34104
890-2910-4	BH02	Soluble	Solid	300.0	34104
890-2910-5	BH03	Soluble	Solid	300.0	34104

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

HPLC/IC (Continued)

Analysis Batch: 34474 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-6	BH03	Soluble	Solid	300.0	34104
MB 880-34104/1-A	Method Blank	Soluble	Solid	300.0	34104
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	300.0	34104
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34104
890-2910-6 MS	BH03	Soluble	Solid	300.0	34104
890-2910-6 MSD	BH03	Soluble	Solid	300.0	34104

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH01
Date Collected: 09/09/22 10:00
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-1
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	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 08:25	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 15:20	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 09:56	CH	EET MID

Client Sample ID: BH01
Date Collected: 09/09/22 10:05
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 08:45	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 15:41	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:01	CH	EET MID

Client Sample ID: BH02
Date Collected: 09/09/22 10:10
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 10:36	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 16:02	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:05	CH	EET MID

Client Sample ID: BH02
Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 10:56	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH02

Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-4

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			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 16:22	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:10	CH	EET MID

Client Sample ID: BH03

Date Collected: 09/09/22 10:20
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-5

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			5.04 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 11:17	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 16:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:15	CH	EET MID

Client Sample ID: BH03

Date Collected: 09/09/22 10:30
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 11:37	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 17:04	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:20	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: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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	T104704400-22-24	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: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2910-1	BH01	Solid	09/09/22 10:00	09/09/22 09:22	1
890-2910-2	BH01	Solid	09/09/22 10:05	09/09/22 09:22	2
890-2910-3	BH02	Solid	09/09/22 10:10	09/09/22 09:22	1
890-2910-4	BH02	Solid	09/09/22 10:15	09/09/22 09:22	2
890-2910-5	BH03	Solid	09/09/22 10:20	09/09/22 09:22	1
890-2910-6	BH03	Solid	09/09/22 10:30	09/09/22 09:22	2

Chain of Custody

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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

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Work Order No: _____

Project Manager:	Joe Gable	Bill to: (if different)	Joe Gable
Company Name:	Ensolum	Company Name:	Ensolum
Address:	3122 National Parks Hwy.	Address:	3122 National Parks Hwy.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	903-386-6073	Email:	jgable@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:	Windward 2H	Turn Around	
Project Number:	03D2024080	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	5 Day TAT
Sampler's Name:	Liz Cheli	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	N/A		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	NM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4	
Total Containers:		Corrected Temperature:	1.2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
BH01	S	9/9/2022	1000	1'	Grab/	1		x	x	x
BH01	S	9/9/2022	1005	2'	Grab/	1		x	x	x
BH02	S	9/9/2022	1010	1'	Grab/	1		x	x	x
BH02	S	9/9/2022	1015	2'	Grab/	1		x	x	x
BH03	S	9/9/2022	1020	1'	Grab/	1		x	x	x
BH03	S	9/9/2022	1030	2'	Grab/	1		x	x	x

890-2910 Chain of Custody

Preservative Codes

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

Sample Comments

Incident number: NAPP2222347897

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		9-9-22 922	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2910-1
SDG Number: Lea County NM

Login Number: 2910
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2910-1
SDG Number: Lea County NM

Login Number: 2910
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 AM

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

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2911-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Windward 2H

For:
Ensolum
2351 W. Northwest Hwy
Suite 1203
Dallas, Texas 75220

Attn: Joe Gable

JKramer

Authorized for release by:
9/22/2022 4:43:07 PM

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

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

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

Client: Ensolum
Project/Site: Windward 2H

Laboratory Job ID: 890-2911-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Job ID: 890-2911-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2911-1

Receipt
The samples were received on 9/9/2022 9:22 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): FS01 (890-2911-1), FS02 (890-2911-2), FS03 (890-2911-3), FS04 (890-2911-4), FS05 (890-2911-5), FS06 (890-2911-6), FS07 (890-2911-7) and FS08 (890-2911-8). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
samples were taken on 9-8-22 not 9-9-22

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34943 and analytical batch 880-35129 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-2911-A-1-F MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

HPLC/IC
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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS01

Lab Sample ID: 890-2911-1
Matrix: Solid
Date Collected: 09/08/22 12:45
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
Toluene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
Ethylbenzene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.00399		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
o-Xylene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
Xylenes, Total	<0.00399	U F2 F1	0.00399		mg/Kg		09/20/22 13:33	09/22/22 12:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:02*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:02*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 17:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 17:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:28*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.8**		4.95		mg/Kg			09/14/22 10:34	1

Client Sample ID: FS02

Lab Sample ID: 890-2911-2
Matrix: Solid
Date Collected: 09/08/22 12:50
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:23*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS02

Lab Sample ID: 890-2911-2
Matrix: Solid

Date Collected: 09/08/22 12:50
Date Received: 09/09/22 09:22
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:23*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/12/22 08:43	09/12/22 17:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/12/22 08:43	09/12/22 17:49	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/12/22 08:43	09/12/22 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:49*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.1**		5.00	mg/Kg			09/14/22 10:39	1

Client Sample ID: FS03

Lab Sample ID: 890-2911-3
Matrix: Solid

Date Collected: 09/08/22 13:00
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
Toluene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		09/20/22 13:33	09/22/22 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:43*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS03

Lab Sample ID: 890-2911-3
Matrix: Solid
Date Collected: 09/08/22 13:00
Date Received: 09/09/22 09:22
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 18:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 18:11	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:11*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.74**		4.99		mg/Kg			09/14/22 10:54	1

Client Sample ID: FS04

Lab Sample ID: 890-2911-4
Matrix: Solid
Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/20/22 13:33	09/22/22 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:04*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:04*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/12/22 08:43	09/12/22 18:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/22 08:43	09/12/22 18:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/22 08:43	09/12/22 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:32*	*1*
o-Terphenyl	*97*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS04

Lab Sample ID: 890-2911-4
Matrix: Solid
Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.5		4.96		mg/Kg			09/14/22 10:59	1

Client Sample ID: FS05

Lab Sample ID: 890-2911-5
Matrix: Solid
Date Collected: 09/08/22 13:50
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:24*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/12/22 08:43	09/12/22 18:54	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/12/22 08:43	09/12/22 18:54	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/12/22 08:43	09/12/22 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:54*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60.5		5.04		mg/Kg			09/14/22 11:04	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS06

Lab Sample ID: 890-2911-6
Matrix: Solid
Date Collected: 09/08/22 14:00
Date Received: 09/09/22 09:22
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:45*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**141**		50.0		mg/Kg			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:15	1
Diesel Range Organics (Over C10-C28)	**141**		50.0		mg/Kg		09/12/22 08:43	09/12/22 19:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:15*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33.1**		5.05		mg/Kg			09/14/22 11:08	1

Client Sample ID: FS07

Lab Sample ID: 890-2911-7
Matrix: Solid
Date Collected: 09/08/22 14:10
Date Received: 09/09/22 09:22
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*09/20/22 13:33*	*09/22/22 14:05*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS07

Lab Sample ID: 890-2911-7
Matrix: Solid

Date Collected: 09/08/22 14:10
Date Received: 09/09/22 09:22
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/20/22 13:33*	*09/22/22 14:05*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**931**		49.9	mg/Kg			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/12/22 08:43	09/12/22 19:37	1
Diesel Range Organics (Over C10-C28)	**931**		49.9	mg/Kg		09/12/22 08:43	09/12/22 19:37	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/12/22 08:43	09/12/22 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:37*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.8**		4.97	mg/Kg			09/14/22 11:13	1

Client Sample ID: FS08

Lab Sample ID: 890-2911-8
Matrix: Solid

Date Collected: 09/08/22 14:20
Date Received: 09/09/22 09:22
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/20/22 13:33	09/22/22 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*09/20/22 13:33*	*09/22/22 16:30*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/20/22 13:33*	*09/22/22 16:30*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**148**		50.0	mg/Kg			09/13/22 09:59	1

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Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS08

Lab Sample ID: 890-2911-8

Date Collected: 09/08/22 14:20
Matrix: Solid
Date Received: 09/09/22 09:22
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:58	1
Diesel Range Organics (Over C10-C28)	**148**		50.0		mg/Kg		09/12/22 08:43	09/12/22 19:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:58*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.3**		5.00		mg/Kg			09/14/22 11:18	1

Surrogate Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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)
890-2911-1	FS01	98	79
890-2911-1 MS	FS01	134 S1+	102
890-2911-1 MSD	FS01	112	74
890-2911-2	FS02	110	82
890-2911-3	FS03	115	88
890-2911-4	FS04	123	112
890-2911-5	FS05	107	81
890-2911-6	FS06	113	83
890-2911-7	FS07	111	86
890-2911-8	FS08	112	93
LCS 880-34943/1-A	Lab Control Sample	115	107
LCSD 880-34943/2-A	Lab Control Sample Dup	115	109
MB 880-34943/5-A	Method Blank	101	85

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)
890-2904-A-1-E MS	Matrix Spike	111	93
890-2904-A-1-F MSD	Matrix Spike Duplicate	114	95
890-2911-1	FS01	119	107
890-2911-2	FS02	101	94
890-2911-3	FS03	102	92
890-2911-4	FS04	109	97
890-2911-5	FS05	118	105
890-2911-6	FS06	120	105
890-2911-7	FS07	120	105
890-2911-8	FS08	106	92
LCS 880-34180/2-A	Lab Control Sample	117	117
LCSD 880-34180/3-A	Lab Control Sample Dup	119	121
MB 880-34180/1-A	Method Blank	106	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34943/5-A
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34943

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 13:33	09/22/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/20/22 13:33*	*09/22/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*09/20/22 13:33*	*09/22/22 11:41*	*1*

Lab Sample ID: LCS 880-34943/1-A
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34943

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1008		mg/Kg		101	70 - 130		
Toluene			0.100	0.09064		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.09612		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.1960		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.1139		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-34943/2-A
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34943

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09785		mg/Kg		98	70 - 130	3	35
Toluene			0.100	0.08600		mg/Kg		86	70 - 130	5	35
Ethylbenzene			0.100	0.09015		mg/Kg		90	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1817		mg/Kg		91	70 - 130	8	35
o-Xylene			0.100	0.1054		mg/Kg		105	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-2911-1 MS
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34943

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F2 F1	0.0998	0.05776	F1	mg/Kg		58	70 - 130		
Toluene	<0.00200	U F2 F1	0.0998	0.05516	F1	mg/Kg		55	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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

Lab Sample ID: 890-2911-1 MS
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34943

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.06394	F1	mg/Kg		64	70 - 130
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.200	0.1274	F1	mg/Kg		64	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0998	0.07919		mg/Kg		79	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-2911-1 MSD
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34943

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1	0.100	0.02841	F2 F1	mg/Kg		28	70 - 130	68	35
Toluene	<0.00200	U F2 F1	0.100	0.03755	F2 F1	mg/Kg		37	70 - 130	38	35
Ethylbenzene	<0.00200	U F2 F1	0.100	0.04302	F2 F1	mg/Kg		43	70 - 130	39	35
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.201	0.07806	F2 F1	mg/Kg		39	70 - 130	48	35
o-Xylene	<0.00200	U F2 F1	0.100	0.05038	F2 F1	mg/Kg		50	70 - 130	44	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*

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

Lab Sample ID: MB 880-34180/1-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34180

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		09/12/22 08:43	09/12/22 10:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 10:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*09/12/22 08:43*	*09/12/22 10:56*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 10:56*	*1*

Lab Sample ID: LCS 880-34180/2-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34180

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	902.7		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1104		mg/Kg		110	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-34180/2-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34180

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

Lab Sample ID: LCSD 880-34180/3-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34180

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	819.5		mg/Kg		82	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1035		mg/Kg		103	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*121*		*70 - 130*

Lab Sample ID: 890-2904-A-1-E MS
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34180

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	815.3		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	111		997	838.4		mg/Kg		73	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 890-2904-A-1-F MSD
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34180

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	850.4		mg/Kg		85	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	111		999	875.8		mg/Kg		77	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34104/1-A
Matrix: Solid
Analysis Batch: 34474

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			09/14/22 08:57	1

Lab Sample ID: LCS 880-34104/2-A
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	238.3		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-34104/3-A
Matrix: Solid
Analysis Batch: 34474

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	238.8		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-2910-A-6-B MS
Matrix: Solid
Analysis Batch: 34474

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	70.8		249	319.6		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2910-A-6-C MSD
Matrix: Solid
Analysis Batch: 34474

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	70.8		249	319.0		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

GC VOA

Prep Batch: 34943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	5035	
890-2911-2	FS02	Total/NA	Solid	5035	
890-2911-3	FS03	Total/NA	Solid	5035	
890-2911-4	FS04	Total/NA	Solid	5035	
890-2911-5	FS05	Total/NA	Solid	5035	
890-2911-6	FS06	Total/NA	Solid	5035	
890-2911-7	FS07	Total/NA	Solid	5035	
890-2911-8	FS08	Total/NA	Solid	5035	
MB 880-34943/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34943/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34943/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2911-1 MS	FS01	Total/NA	Solid	5035	
890-2911-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 35129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8021B	34943
890-2911-2	FS02	Total/NA	Solid	8021B	34943
890-2911-3	FS03	Total/NA	Solid	8021B	34943
890-2911-4	FS04	Total/NA	Solid	8021B	34943
890-2911-5	FS05	Total/NA	Solid	8021B	34943
890-2911-6	FS06	Total/NA	Solid	8021B	34943
890-2911-7	FS07	Total/NA	Solid	8021B	34943
890-2911-8	FS08	Total/NA	Solid	8021B	34943
MB 880-34943/5-A	Method Blank	Total/NA	Solid	8021B	34943
LCS 880-34943/1-A	Lab Control Sample	Total/NA	Solid	8021B	34943
LCSD 880-34943/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34943
890-2911-1 MS	FS01	Total/NA	Solid	8021B	34943
890-2911-1 MSD	FS01	Total/NA	Solid	8021B	34943

Analysis Batch: 35182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	Total BTEX	
890-2911-2	FS02	Total/NA	Solid	Total BTEX	
890-2911-3	FS03	Total/NA	Solid	Total BTEX	
890-2911-4	FS04	Total/NA	Solid	Total BTEX	
890-2911-5	FS05	Total/NA	Solid	Total BTEX	
890-2911-6	FS06	Total/NA	Solid	Total BTEX	
890-2911-7	FS07	Total/NA	Solid	Total BTEX	
890-2911-8	FS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8015B NM	34180
890-2911-2	FS02	Total/NA	Solid	8015B NM	34180
890-2911-3	FS03	Total/NA	Solid	8015B NM	34180
890-2911-4	FS04	Total/NA	Solid	8015B NM	34180
890-2911-5	FS05	Total/NA	Solid	8015B NM	34180
890-2911-6	FS06	Total/NA	Solid	8015B NM	34180

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

GC Semi VOA (Continued)

Analysis Batch: 34169 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-7	FS07	Total/NA	Solid	8015B NM	34180
890-2911-8	FS08	Total/NA	Solid	8015B NM	34180
MB 880-34180/1-A	Method Blank	Total/NA	Solid	8015B NM	34180
LCS 880-34180/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34180
LCSD 880-34180/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34180
890-2904-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	34180
890-2904-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34180

Prep Batch: 34180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8015NM Prep	
890-2911-2	FS02	Total/NA	Solid	8015NM Prep	
890-2911-3	FS03	Total/NA	Solid	8015NM Prep	
890-2911-4	FS04	Total/NA	Solid	8015NM Prep	
890-2911-5	FS05	Total/NA	Solid	8015NM Prep	
890-2911-6	FS06	Total/NA	Solid	8015NM Prep	
890-2911-7	FS07	Total/NA	Solid	8015NM Prep	
890-2911-8	FS08	Total/NA	Solid	8015NM Prep	
MB 880-34180/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34180/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34180/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2904-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2904-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8015 NM	
890-2911-2	FS02	Total/NA	Solid	8015 NM	
890-2911-3	FS03	Total/NA	Solid	8015 NM	
890-2911-4	FS04	Total/NA	Solid	8015 NM	
890-2911-5	FS05	Total/NA	Solid	8015 NM	
890-2911-6	FS06	Total/NA	Solid	8015 NM	
890-2911-7	FS07	Total/NA	Solid	8015 NM	
890-2911-8	FS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Soluble	Solid	DI Leach	
890-2911-2	FS02	Soluble	Solid	DI Leach	
890-2911-3	FS03	Soluble	Solid	DI Leach	
890-2911-4	FS04	Soluble	Solid	DI Leach	
890-2911-5	FS05	Soluble	Solid	DI Leach	
890-2911-6	FS06	Soluble	Solid	DI Leach	
890-2911-7	FS07	Soluble	Solid	DI Leach	
890-2911-8	FS08	Soluble	Solid	DI Leach	
MB 880-34104/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2910-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

HPLC/IC (Continued)

Leach Batch: 34104 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Soluble	Solid	300.0	34104
890-2911-2	FS02	Soluble	Solid	300.0	34104
890-2911-3	FS03	Soluble	Solid	300.0	34104
890-2911-4	FS04	Soluble	Solid	300.0	34104
890-2911-5	FS05	Soluble	Solid	300.0	34104
890-2911-6	FS06	Soluble	Solid	300.0	34104
890-2911-7	FS07	Soluble	Solid	300.0	34104
890-2911-8	FS08	Soluble	Solid	300.0	34104
MB 880-34104/1-A	Method Blank	Soluble	Solid	300.0	34104
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	300.0	34104
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34104
890-2910-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	34104
890-2910-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34104

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS01
Date Collected: 09/08/22 12:45
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 12:02	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 17:28	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:34	CH	EET MID

Client Sample ID: FS02
Date Collected: 09/08/22 12:50
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-2
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			5.03 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 12:23	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 17:49	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:39	CH	EET MID

Client Sample ID: FS03
Date Collected: 09/08/22 13:00
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-3
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			5.05 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 12:43	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 18:11	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:54	CH	EET MID

Client Sample ID: FS04
Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-4
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			5.04 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 13:04	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS04

Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-4

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			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 18:32	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:59	CH	EET MID

Client Sample ID: FS05

Date Collected: 09/08/22 13:50
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-5

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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 13:24	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 18:54	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:04	CH	EET MID

Client Sample ID: FS06

Date Collected: 09/08/22 14:00
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-6

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			4.99 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 13:45	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 19:15	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:08	CH	EET MID

Client Sample ID: FS07

Date Collected: 09/08/22 14:10
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-7

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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 14:05	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 19:37	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS07

Lab Sample ID: 890-2911-7

Date Collected: 09/08/22 14:10

Matrix: Solid

Date Received: 09/09/22 09:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:13	CH	EET MID

Client Sample ID: FS08

Lab Sample ID: 890-2911-8

Date Collected: 09/08/22 14:20

Matrix: Solid

Date Received: 09/09/22 09:22

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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 16:30	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 19:58	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:18	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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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	T104704400-22-24	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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2911-1	FS01	Solid	09/08/22 12:45	09/09/22 09:22	1
890-2911-2	FS02	Solid	09/08/22 12:50	09/09/22 09:22	1
890-2911-3	FS03	Solid	09/08/22 13:00	09/09/22 09:22	1
890-2911-4	FS04	Solid	09/08/22 13:15	09/09/22 09:22	1
890-2911-5	FS05	Solid	09/08/22 13:50	09/09/22 09:22	1
890-2911-6	FS06	Solid	09/08/22 14:00	09/09/22 09:22	0.5
890-2911-7	FS07	Solid	09/08/22 14:10	09/09/22 09:22	0.5
890-2911-8	FS08	Solid	09/08/22 14:20	09/09/22 09:22	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Joe Gable	Bill to: (if different)	Joe Gable
Company Name:	Ensolum	Company Name:	Ensolum
Address:	3122 National Parks Hwy.	Address:	3122 National Parks Hwy.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	903-388-8073	Email:	jgable@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:	Windward 2H	Turn Around	
Project Number:	03D2024080	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	5 Day TAT
Sampler's Name:	Liz Cheli	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	N/A		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TNM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4	
Total Containers:		Corrected Temperature:	1.2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Parameters
FS01	S	9/9/2022	1245	1'	Comp	1		x	x	x	
FS02	S	9/9/2022	1250	1'	Comp	1		x	x	x	
FS03	S	9/9/2022	1300	1'	Comp	1		x	x	x	
FS04	S	9/9/2022	1315	1'	Comp	1		x	x	x	
FS05	S	9/9/2022	1350	1'	Comp	1		x	x	x	
FS06	S	9/9/2022	1400	0.5'	Comp	1		x	x	x	
FS07	S	9/9/2022	1410	0.5'	Comp	1		x	x	x	
FS08	S	9/9/2022	1420	0.5'	Comp	1		x	x	x	

ANALYSIS REQUEST

890-2911 Chain of Custody

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

Sample Comments
Incident ID: NAPP2222347897

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		9.9.2022			
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020 2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2911-1
SDG Number: Lea County NM

Login Number: 2911
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2911-1
SDG Number: Lea County NM

Login Number: 2911
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Nobui, Jennifer, EMNRD
To: Kalei Jennings
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] COP- Sampling Notification (Week of 09/19/22-09/23/22)
Date: Tuesday, September 20, 2022 10:26:49 AM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Kalei

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.

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Tuesday, September 20, 2022 8:02 AM
To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: Fw: [EXTERNAL] COP- Sampling Notification (Week of 09/19/22-09/23/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Monday, September 19, 2022 8:28 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] COP- Sampling Notification (Week of 09/19/22-09/23/22)

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

All,

COP plans to complete final sampling activities at the following sites the week of September 19, 2022.

Tuesday (9/20/2022)

- Federal 9 Com/ NAPP2218848721
- Windward 4H Flowline/NAPP2218850477
- Windward 2H CTB Flare Fire/NAPP2222347897

Wednesday (9/21/2022)

- -Federal 9 Com/ NAPP2218848721
- Windward 4H Flowline/NAPP2218850477
- Windward 2H CTB Flare Fire/NAPP2222347897

Thursday (9/22/2022)

- Corvo Federal 4/ NAPP2217430297

Thank you,

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

ENSOLUM

APPENDIX F

Final C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name _____ Title: _____

Signature: __ _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

L48 Spill Volume Estimate Form

Facility Name & Number:	WINDWARD 2H CTB
Asset Area:	DBEN
Release Discovery Date & Time:	7/30/2022 9:45AM
Release Type:	Oil
Provide any known details about the event:	FLARE FIRE FROM PRODUCTION K.O. DUMP LINE PLUGGED

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	80.0	20.0	0.10	4	1600.000	0.002	0.593	0.000	0.593
Rectangle B					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
								Total Volume Release:	0.593

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2235445306
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2235445306
District RP	
Facility ID	
Application ID	

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

Printed Name: ___Charles Beauvais_____ Title: _Senior Environmental Engineer_____

Signature:___Charles R. Beauvais II_____ Date: __12/20/2022_____

email: _Charles.R.Beauvais@conocophillips.com _____ Telephone: ___575-988-2043_____

OCD Only

Received by: ___Jocelyn Harimon_____ Date: ___12/20/2022___

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2235445306
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 12/20/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 12/20/2022

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

December 20, 2022

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
Windward Federal CTB
Incident Number NAPP2235445306
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 site assessment and soil sampling activities performed at the Windward Federal CTB (Site). The purpose of the site assessment and soil sampling activities was to address impacts to soil resulting from a crude oil flare fire at the Site. Based on field observations, field screening activities, and laboratory analytical results from the soil sampling events, COG is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2235445306.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 30, Township 24 South, Range 32 East, in Lea County, New Mexico (32.195278° N, 103.718056° W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 30, 2022, a plug in the knockout water meter resulted in fluid being sent to the flare and resulted in a fire on pad. The released volume was estimated to be approximately 0.593 barrels (bbls) of crude oil. The released crude oil ignited and extinguished itself after reaching the ground. COG reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email on August 1, 2022 and submitted a Release Notification Form C-141 (Form C-141) on August 11, 2022. The release was assigned Incident Number NAPP2235445306.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, (19.15.29.12) 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. On September 15, 2022, borehole BH01 (New Mexico Office of the State Engineer (NMOSE) file number C-4665) was advanced to a depth of 120 feet bgs via air rotary drill rig. The borehole was located approximately 0.31 miles east of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow

infill of groundwater. After the 72-hour waiting period, groundwater was not observed and it was confirmed groundwater beneath the Site is greater than 120 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an freshwater pond, located approximately 5,596 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On August 11, 2022, Ensolum personnel visited the Site to evaluate the release extent and conduct Site assessment activities. Ensolum personnel collected seven soil samples (SS01 through SS07), collected at a depth of 0.5 feet bgs around and within the release extent, to assess the lateral extent of the release. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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 at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemical of concerns (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 preliminary soil samples SS02 and SS03, collected within the release extent, indicated all COC concentrations are compliant with the Site Closure Criteria. Laboratory analytical results for preliminary soil samples SS04 through SS07, collected around the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for preliminary soil samples SS01 indicated TPH concentrations exceeded the Site Closure Criteria. Based on visible staining in the release area and laboratory analytical results for preliminary soil sample SS01, delineation and excavation activities were warranted.

DELINEATION AND EXCAVATION SOIL SAMPLNG ACTIVITIES

On September 9, 2022, Ensolum personnel were at the Site to oversee delineation and excavation activities based on visible staining in the release area and laboratory analytical results for preliminary soil sample SS01. Boreholes BH01 through BH03 were advanced via backhoe within the release extent to assess the vertical extent. The boreholes were advanced to a depth of 2 feet bgs. Delineation soil samples were collected from each borehole at depths of 1-foot and 2 feet bgs. Soil from the boreholes was field screened for VOCs and chloride. Field screening results and observations for the boreholes were logged on lithologic soil sampling logs, which are included in Appendix B. The delineation soil sample locations are depicted on Figure 3.

Upon completion of delineation activities, stained soil was excavated from the release area as indicated by visible staining and laboratory analytical results for preliminary soil sample SS01. Excavation activities were performed using track-mounted backhoe and transport vehicles. The excavation occurred on pad. 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 C.

Following removal of the 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 FS08 were collected from the floor of the excavation at depths ranging from 0.5 feet to 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 4.

The excavation area measured approximately 1,600 square feet. A total of 54 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.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from boreholes BH01 and BH03 indicated all COC concentrations were compliant with the Site Closure Criteria.

Laboratory analytical results for excavation floor samples FS01 through FS08 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

CLOSURE REQUEST

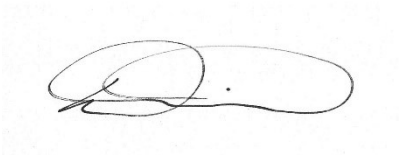
Site assessment and excavation activities were conducted at the Site to address the July 30, 2022, crude oil flare fire. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation was required. COG will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Excavation of stained soil has mitigated impacts at this Site. Depth to groundwater has been determined 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 NAPP2235445306.

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

Sincerely,
Ensolum, LLC

Kalei Jennings
Senior Project Manager



Daniel R. Moir, PG
Senior Managing Geologist

cc: Charles Beauvais, COG Operating, LLC
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic/Soil Sampling Log
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	Final C-141

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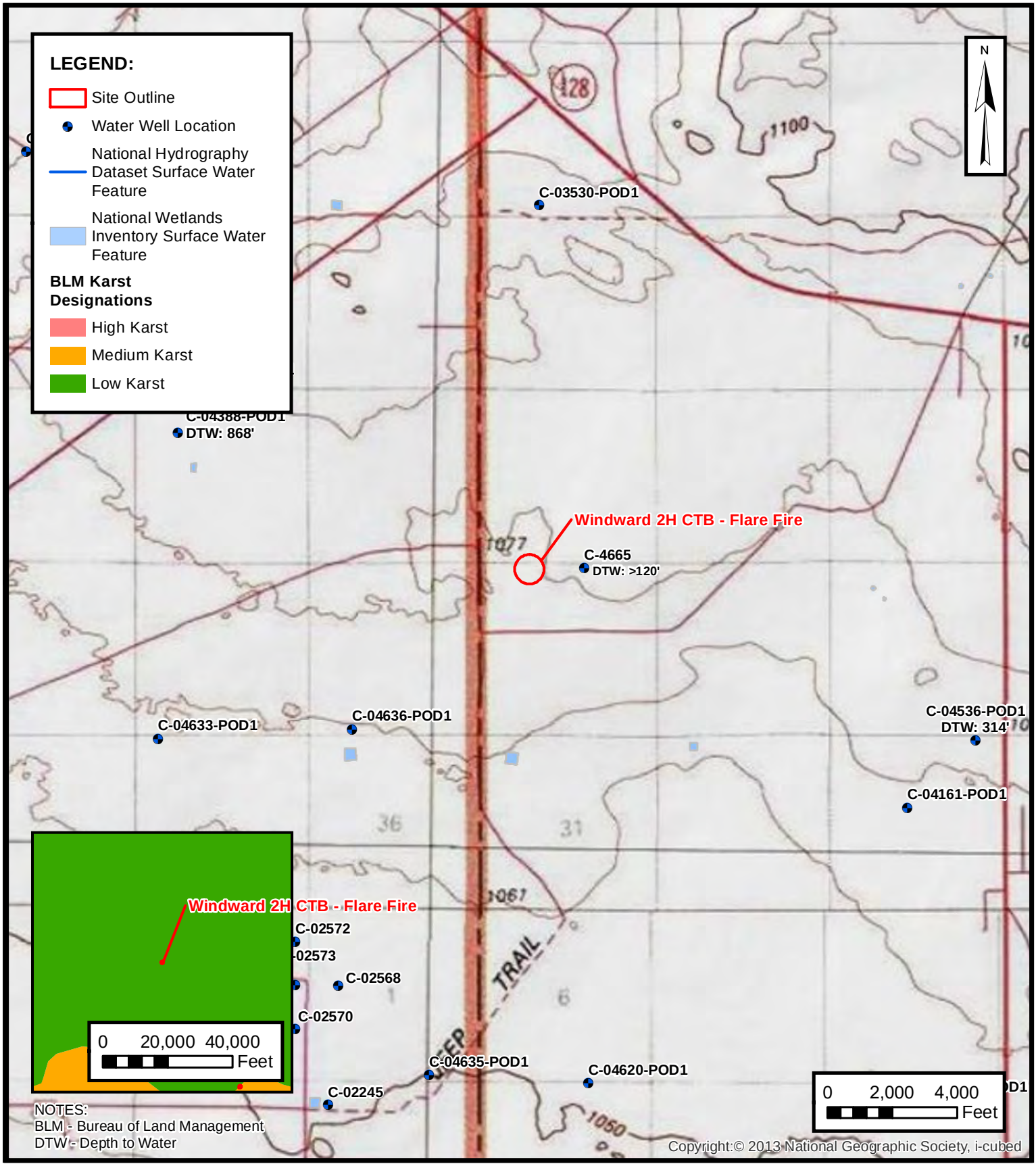
FIGURES



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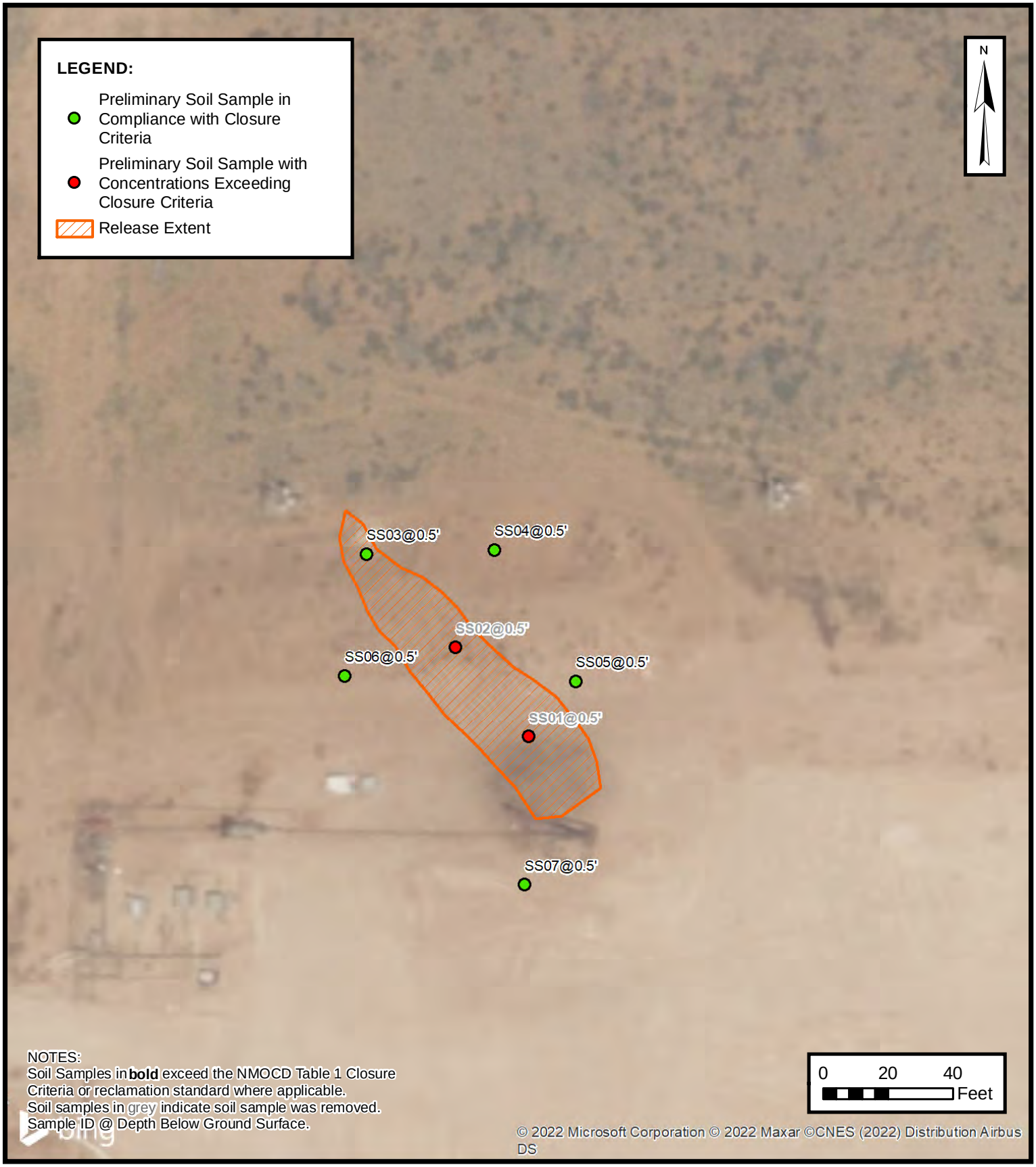
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE

1



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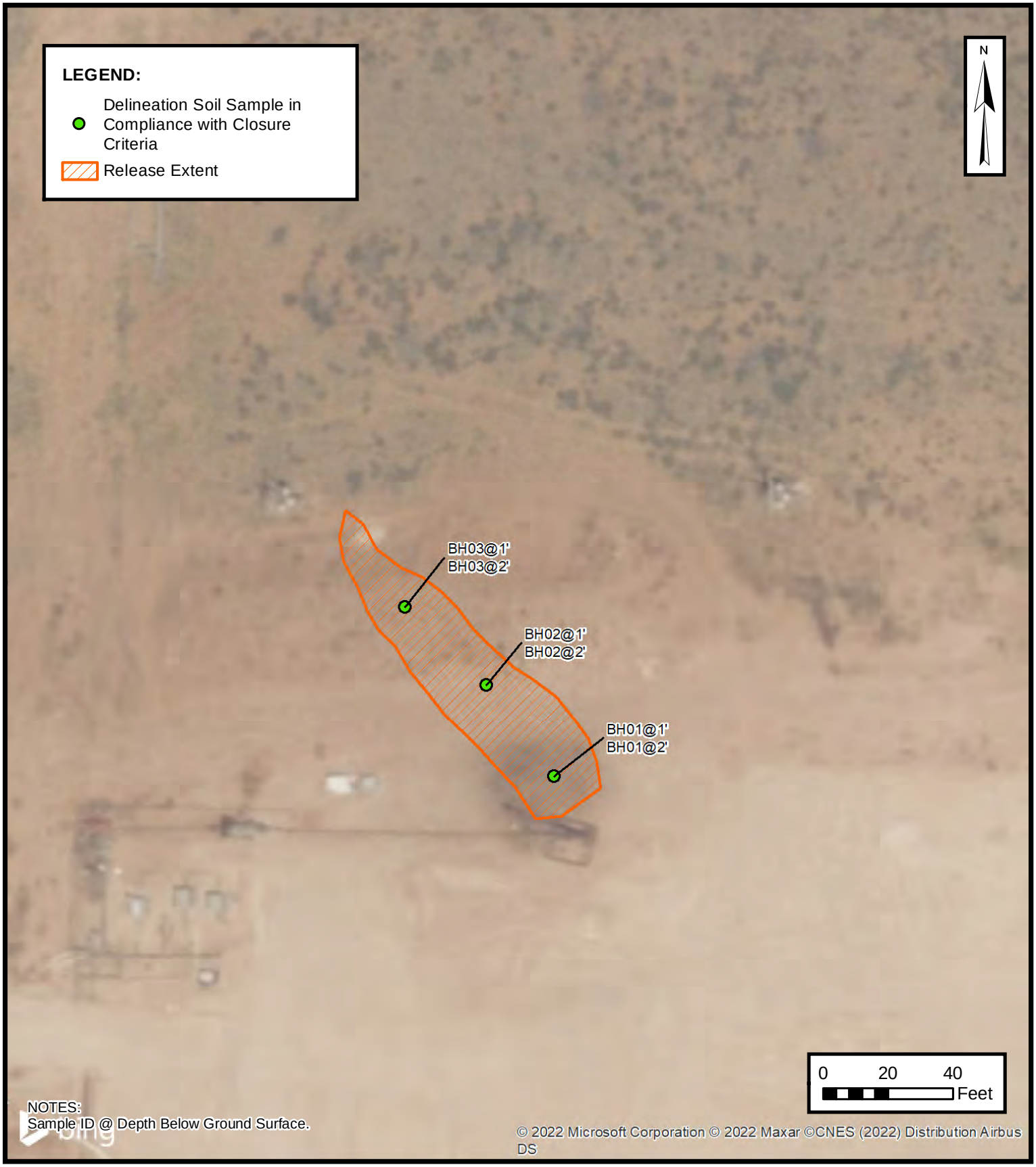
PRELIMINARY SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE
2



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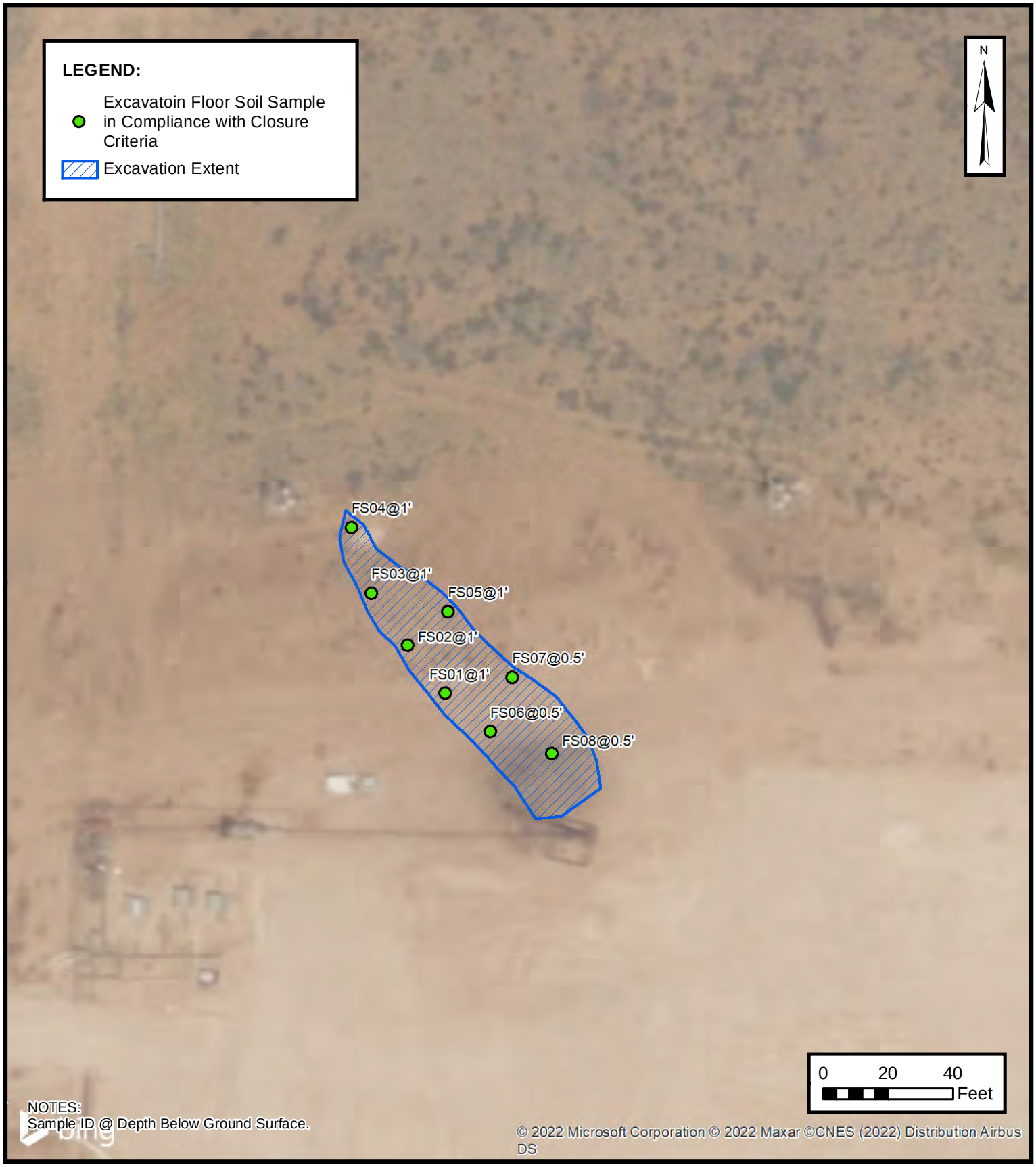
DELINEATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE
3



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EXCAVATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
WINDWARD 2H CTB - FLARE FIRE
nAPP2235445306
Unit D, Sec 30 T24S R32E
Lea County, New Mexico

FIGURE

4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Windward 2H Flare Fire
ConocoPhillips Company
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Assessment Soil Samples										
SS01	08/11/2022	0.5	<0.00200	<0.00401	<50.0	2,010	874	**2,010**	**2,880**	23.0
SS02	08/11/2022	0.5	<0.00200	<0.00401	<49.9	1,060	706	**1,060**	1,770	211
SS03	08/11/2022	0.5	<0.00202	<0.00404	<50.0	65.2	78.3	65.2	144	53.9
SS04	08/11/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	55.8	<49.9	55.8	29.1
SS05	08/11/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	98.3	<50.0	98.3	206
SS06	08/11/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	56.9	<49.9	56.9	32.6
SS07	08/11/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	66.1
Delineation Soil Samples										
BH01	09/09/2022	1	<0.00200	<0.00401	<49.8	138	<49.8	138	138	9.13
	09/09/2022	2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	24.7
BH02	09/09/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	27.9
	09/09/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	25.3
BH03	09/09/2022	1	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	52.7
	09/09/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	70.8
Confirmation Soil Samples										
FS01	09/09/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	12.8
FS02	09/09/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	10.1
FS03	09/09/2022	1	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	8.74
FS04	09/09/2022	1	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	17.5
FS05	09/09/2022	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	60.5
FS06	09/09/2022	0.5	<0.00200	<0.00401	<50.0	141	<50.0	141	141	33.1
FS07	09/09/2022	0.5	<0.00201	<0.00402	<49.9	931	<49.9	931	931	17.8
FS08	09/09/2022	0.5	<0.00200	<0.00399	<50.0	148	<50.0	148	148	21.3

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Sample results that have been greyed out have been excavated.

ENSOLUM

APPENDIX A

Referenced Well Records

ENSOLUM

Client: CONOCO PHILLIPS
Project Name: KING TUT FEDERAL 003H
Project Location: LEA COUNTY, NM
Project Manager: KALEI JENNINGS

BORING LOG NUMBER
BH01
Project No. 03D2024082

Date Sampled: 09/15/2022
Drilled by: WTWWS
Driller: RUSSELL SOUTHERLAND
Logged by: HADLIE GREEN
Sampler: HADLIE GREEN

Ground Surface Elevation: —
Top of Casing Elevation: —
North Coordinate: —
West Coordinate: —
Bench Mark Elevation: —
At Completion
At Well Stabilization

Borehole Diameter: 6"
Casing Diameter: —
Well Materials: —
Surface Completion: —
Boring Method: AIR ROTARY

DEPTH (ft)	SAMPLE INTERVAL	SAMPLE ID	RECOVERY (%)	FID/PID READING (ppm)	POTENTIOMETRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTION	BORING / WELL COMPLETION (GRAPHIC DEPICTION)
							pg. 1 of 2	
0						0' CCHE	CALICHE, light tan, fine to medium grain, up to 1" limestone clasts, slightly moist, no stain/odor.	
						10' SM	SILTY SAND, pinkish red, fine grain, 1-2 cm limestone clasts, well sorted, moderate grade, slightly consolidated, no stain/odor.	
20'								
40'						SM	SAA, reddish brown, trace limestone clasts (1-2 cm).	
60'						SM	SAA, abundant subrounded mud clasts up to 1".	
80'								
						SM	90': SAA, some green mud clasts (1-3 mm), slightly consolidated.	
100'								

ENSOLUM

Client: CONOCO PHILLIPS
Project Name: KING TUT FEDERAL 003H
Project Location: LEA COUNTY, NM
Project Manager: KALEI JENNINGS

BORING LOG NUMBER
BH01
Project No. 03D2024082

Date Sampled: 09/15/2022
Drilled by: WTWWS
Driller: RUSSELL SOUTHERLAND
Logged by: HADLIE GREEN
Sampler: HADLIE GREEN

Ground Surface Elevation:
Top of Casing Elevation:
North Coordinate:
West Coordinate:
Bench Mark Elevation:
At Completion
At Well Stabilization

Borehole Diameter: 6"
Casing Diameter: -
Well Materials:
Surface Completion: -
Boring Method: AIR ROTARY

DEPTH (ft)	SAMPLE INTERVAL	SAMPLE ID	RECOVERY (%)	FID/PID READING (ppm)	POTENTIOMETRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTION	BORING / WELL COMPLETION (GRAPHIC DEPICTION)
							pg. 2 of 2	
100'						SM	SILTY SAND, Reddish brown, fine grain, less mud clasts, No green mud clasts, well sorted, slightly consolidated, no stain / odor.	
120'							TD @ 120 feet bgs	

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
22333	C 04388 POD1	3	2	1	23	24S	31E	617546	3564006

Driller License: 1058 **Driller Company:** KEY'S DRILLING & PUMP SERVICE

Driller Name: KEY, GARYR.S AICHARDDENAS

Drill Start Date:	12/18/2019	**Drill Finish Date:**	02/22/2020	**Plug Date:**	
Log File Date:	02/27/2020	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	60 GPM
Casing Size:	4.50	**Depth Well:**	910 feet	**Depth Water:**	868 feet

Water Bearing Stratifications:	Top	Bottom	Description
	866	868	Limestone/Dolomite/Chalk

Casing Perforations:	Top	Bottom
	850	910

ENSOLUM

APPENDIX B

Lithologic/Soil Sampling Log

ENSOLUM

Sample Name: BH01	Date: 9-8-2022	
Site Name: Windward 2H		
Incident Number: nAPP2235445306		
Job Number: 03D2024080		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LC	Method: Pothole
Coordinates: 32.195554, -103.717726	Hole Diameter: N/A	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SM	Silty sand, brown and tan no odor, dry
D	<168	10.01	Y	BH01	1	1		
D	168	6.07	Y	BH01	2	2		TD: 2 feet bgs
						3		
						4		

ENSOLUM

	Sample Name: BH02	Date: 9-8-2022
	Site Name: Windward 2H	
	Incident Number: nAPP2235445306	
	Job Number: 03D2024080	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LC	Method: Pothole
Coordinates: 32.195631, -103.717792	Hole Diameter: N/A	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SM	Silty sand, brown and tan no odor, dry
D	<168	0	N	BH02	1	1		
D	<168	0	N	BH02	2	2		TD: 2 feet bgs
						3		
						4		

ENSOLUM

	Sample Name: BH03	Date: 9-8-2022
	Site Name: Windward 2H	
	Incident Number: nAPP2235445306	
	Job Number: 03D2024080	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LC	Method: Pothole
Coordinates: 32.195696, -103.717873	Hole Diameter: N/A	Total Depth: 2'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SM	Silty sand, brown and tan no odor, dry
D	168	0	N	BH03	1	1		
D	240.8	0	N	BH03	2	2		TD: 2 feet bgs
						3		
						4		

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
Windward 2H CTB - Flare
Incident Number nAPP2235445306

Photograph 1 Date: September 8, 2022
Description: Photo of release extent prior.

Photograph 2 Date: September 8, 2022
Description: Photo of release extent.

Photograph 3 Date: September 8, 2022
Description: Photo of release extent.

Photograph 4 Date: September 8, 2022
Description: Photo of release extent.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2746-1
Laboratory Sample Delivery Group: 03D2024080
Client Project/Site: Windward 2H Flare Fire

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/25/2022 12:48:03 PM

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

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

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

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Laboratory Job ID: 890-2746-1
SDG: 03D2024080

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Job ID: 890-2746-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2746-1

Receipt
The samples were received on 8/11/2022 3:27 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-2746-1), (CCV 880-32557/20), (CCV 880-32557/33), (CCV 880-32557/51), (LCS 880-32561/1-A), (LCSD 880-32561/2-A), (MB 880-32546/5-A), (MB 880-32561/5-A), (880-18346-A-21-D MS) and (880-18346-A-21-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-18346-A-21-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32833 and analytical batch 880-32836 were outside control limits. Sample matrix interference and/or non-homogeneity are 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-32175 and analytical batch 880-32121 were outside control limits. Sample matrix interference and/or non-homogeneity are 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.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-32339 and analytical batch 880-32436 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS01

Lab Sample ID: 890-2746-1
Matrix: Solid
Date Collected: 08/11/22 11:05
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 09:10	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/20/22 10:39	08/21/22 09:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*156*	*S1+*	*70 - 130*	*08/20/22 10:39*	*08/21/22 09:10*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*08/20/22 10:39*	*08/21/22 09:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2880**		50.0		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 03:24	1
Diesel Range Organics (Over C10-C28)	**2010**		50.0		mg/Kg		08/15/22 13:57	08/16/22 03:24	1
Oil Range Organics (Over C28-C36)	**874**		50.0		mg/Kg		08/15/22 13:57	08/16/22 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:24*	*1*
o-Terphenyl	*100*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.0**		5.05		mg/Kg			08/19/22 01:35	1

Client Sample ID: SS02

Lab Sample ID: 890-2746-2
Matrix: Solid
Date Collected: 08/11/22 11:10
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
Toluene	**0.00208**		0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 08:28	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 08:28	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS02

Lab Sample ID: 890-2746-2
Matrix: Solid
Date Collected: 08/11/22 11:10
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:28*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1770**		49.9		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 03:44	1
Diesel Range Organics (Over C10-C28)	**1060**		49.9		mg/Kg		08/15/22 13:57	08/16/22 03:44	1
Oil Range Organics (Over C28-C36)	**706**		49.9		mg/Kg		08/15/22 13:57	08/16/22 03:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*92*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:44*	*1*
o-Terphenyl	*88*		*70 - 130*	*08/15/22 13:57*	*08/16/22 03:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**211**		4.98		mg/Kg			08/19/22 02:03	1

Client Sample ID: SS03

Lab Sample ID: 890-2746-3
Matrix: Solid
Date Collected: 08/11/22 11:15
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/24/22 10:17	08/25/22 08:49	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		08/24/22 10:17	08/25/22 08:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:49*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*08/24/22 10:17*	*08/25/22 08:49*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			08/22/22 10:17	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS03

Lab Sample ID: 890-2746-3
Matrix: Solid
Date Collected: 08/11/22 11:15
Date Received: 08/11/22 15:27
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**144**		50.0		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 00:03	1
Diesel Range Organics (Over C10-C28)	**65.2**		50.0		mg/Kg		08/15/22 13:57	08/16/22 00:03	1
Oil Range Organics (Over C28-C36)	**78.3**		50.0		mg/Kg		08/15/22 13:57	08/16/22 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:03*	*1*
o-Terphenyl	*95*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.9**		4.98		mg/Kg			08/19/22 02:12	1

Client Sample ID: SS04

Lab Sample ID: 890-2746-4
Matrix: Solid
Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
Toluene	**0.00268**		0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/24/22 10:17	08/25/22 09:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:09*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:09*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**55.8**		49.9		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 00:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 00:23	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS04

Lab Sample ID: 890-2746-4
Matrix: Solid
Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	**55.8**		49.9		mg/Kg		08/15/22 13:57	08/16/22 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:23*	*1*
o-Terphenyl	*89*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29.1**		4.95		mg/Kg			08/19/22 02:21	1

Client Sample ID: SS05

Lab Sample ID: 890-2746-5
Matrix: Solid
Date Collected: 08/11/22 11:25
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/24/22 10:17	08/25/22 09:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/24/22 10:17	08/25/22 09:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:29*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**98.3**		50.0		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 00:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/15/22 13:57	08/16/22 00:43	1
Oil Range Organics (Over C28-C36)	**98.3**		50.0		mg/Kg		08/15/22 13:57	08/16/22 00:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:43*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/15/22 13:57*	*08/16/22 00:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS05

Lab Sample ID: 890-2746-5
Matrix: Solid

Date Collected: 08/11/22 11:25
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**206**		4.99		mg/Kg			08/19/22 02:30	1

Client Sample ID: SS06

Lab Sample ID: 890-2746-6
Matrix: Solid

Date Collected: 08/11/22 11:30
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 09:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/24/22 10:17	08/25/22 09:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:50*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*08/24/22 10:17*	*08/25/22 09:50*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/22/22 10:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**56.9**		49.9		mg/Kg			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 01:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/15/22 13:57	08/16/22 01:03	1
Oil Range Organics (Over C28-C36)	**56.9**		49.9		mg/Kg		08/15/22 13:57	08/16/22 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/15/22 13:57*	*08/16/22 01:03*	*1*
o-Terphenyl	*85*		*70 - 130*	*08/15/22 13:57*	*08/16/22 01:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.6**		5.00		mg/Kg			08/19/22 02:39	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS07

Date Collected: 08/11/22 11:35
Date Received: 08/11/22 15:27
Sample Depth: 0.5

Lab Sample ID: 890-2746-7

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/24/22 10:17	08/25/22 10:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/24/22 10:17	08/25/22 10:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*08/24/22 10:17*	*08/25/22 10:10*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/24/22 10:17*	*08/25/22 10:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/22/22 10:17	1

Method: 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			08/16/22 09:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/15/22 13:57	08/16/22 02:44	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/15/22 13:57	08/16/22 02:44	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/15/22 13:57	08/16/22 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/15/22 13:57*	*08/16/22 02:44*	*1*
o-Terphenyl	*89*		*70 - 130*	*08/15/22 13:57*	*08/16/22 02:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**66.1**		4.95		mg/Kg			08/19/22 02:49	1

Surrogate Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-18346-A-21-D MS	Matrix Spike	202 S1+	95
880-18346-A-21-E MSD	Matrix Spike Duplicate	207 S1+	100
890-2746-1	SS01	156 S1+	112
890-2746-2	SS02	76	116
890-2746-3	SS03	87	110
890-2746-4	SS04	91	101
890-2746-5	SS05	95	100
890-2746-6	SS06	93	100
890-2746-7	SS07	90	102
890-2795-A-4-D MS	Matrix Spike	105	103
890-2795-A-4-E MSD	Matrix Spike Duplicate	98	102
LCS 880-32561/1-A	Lab Control Sample	209 S1+	99
LCS 880-32833/1-A	Lab Control Sample	93	95
LCSD 880-32561/2-A	Lab Control Sample Dup	196 S1+	97
LCSD 880-32833/2-A	Lab Control Sample Dup	99	101
MB 880-32546/5-A	Method Blank	137 S1+	70
MB 880-32561/5-A	Method Blank	152 S1+	70
MB 880-32772/5-A	Method Blank	79	118
MB 880-32833/5-A	Method Blank	81	120

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)
880-18072-A-1-B MS	Matrix Spike	79	80
880-18072-A-1-C MSD	Matrix Spike Duplicate	80	79
890-2746-1	SS01	97	100
890-2746-2	SS02	92	88
890-2746-3	SS03	91	95
890-2746-4	SS04	90	89
890-2746-5	SS05	88	94
890-2746-6	SS06	86	85
890-2746-7	SS07	86	89
LCS 880-32175/2-A	Lab Control Sample	123	125
LCSD 880-32175/3-A	Lab Control Sample Dup	110	115
MB 880-32175/1-A	Method Blank	89	98

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-32546/5-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32546

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/19/22 19:05	08/20/22 13:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/19/22 19:05	08/20/22 13:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*08/19/22 19:05*	*08/20/22 13:06*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*08/19/22 19:05*	*08/20/22 13:06*	*1*

Lab Sample ID: MB 880-32561/5-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32561

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/20/22 10:39	08/21/22 02:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/20/22 10:39	08/21/22 02:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*08/20/22 10:39*	*08/21/22 02:38*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*08/20/22 10:39*	*08/21/22 02:38*	*1*

Lab Sample ID: LCS 880-32561/1-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32561

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1162		mg/Kg		116	70 - 130		
Toluene			0.100	0.1167		mg/Kg		117	70 - 130		
Ethylbenzene			0.100	0.1229		mg/Kg		123	70 - 130		
m-Xylene & p-Xylene			0.200	0.2462		mg/Kg		123	70 - 130		
o-Xylene			0.100	0.1247		mg/Kg		125	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*209*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-32561/2-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32561

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1228		mg/Kg		123	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: LCSD 880-32561/2-A
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32561

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1197		mg/Kg		120	70 - 130	3	35
Ethylbenzene			0.100	0.1226		mg/Kg		123	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2445		mg/Kg		122	70 - 130	1	35
o-Xylene			0.100	0.1236		mg/Kg		124	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*196*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-18346-A-21-D MS
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32561

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000402	U	0.0998	0.1219		mg/Kg		122	70 - 130
Toluene	<0.000402	U	0.0998	0.1183		mg/Kg		119	70 - 130
Ethylbenzene	<0.000402	U	0.0998	0.1246		mg/Kg		125	70 - 130
m-Xylene & p-Xylene	<0.000805	U	0.200	0.2501		mg/Kg		125	70 - 130
o-Xylene	<0.000402	U	0.0998	0.1235		mg/Kg		123	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*202*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-18346-A-21-E MSD
Matrix: Solid
Analysis Batch: 32557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32561

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.000402	U	0.100	0.1204		mg/Kg		120	70 - 130	1	35
Toluene	<0.000402	U	0.100	0.1173		mg/Kg		117	70 - 130	1	35
Ethylbenzene	<0.000402	U	0.100	0.1207		mg/Kg		120	70 - 130	3	35
m-Xylene & p-Xylene	<0.000805	U	0.200	0.2380		mg/Kg		119	70 - 130	5	35
o-Xylene	<0.000402	U	0.100	0.1215		mg/Kg		121	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*207*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 880-32772/5-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32772

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/23/22 10:42	08/24/22 14:51	1

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: MB 880-32772/5-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32772

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/23/22 10:42	08/24/22 14:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/23/22 10:42	08/24/22 14:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*08/23/22 10:42*	*08/24/22 14:51*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*08/23/22 10:42*	*08/24/22 14:51*	*1*

Lab Sample ID: MB 880-32833/5-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32833

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/22 10:17	08/25/22 02:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/24/22 10:17	08/25/22 02:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*08/24/22 10:17*	*08/25/22 02:46*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*08/24/22 10:17*	*08/25/22 02:46*	*1*

Lab Sample ID: LCS 880-32833/1-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32833

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08613		mg/Kg		86	70 - 130		
Toluene			0.100	0.09677		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.09345		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1748		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.09368		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-32833/2-A
Matrix: Solid
Analysis Batch: 32836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32833

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09646		mg/Kg		96	70 - 130	11	35
Toluene			0.100	0.1048		mg/Kg		105	70 - 130	8	35
Ethylbenzene			0.100	0.1015		mg/Kg		101	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1862		mg/Kg		93	70 - 130	6	35
o-Xylene			0.100	0.09933		mg/Kg		99	70 - 130	6	35

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-2795-A-4-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32836 — **Prep Batch: 32833**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1	0.100	0.09197		mg/Kg		92	70 - 130
Toluene	<0.00201	U F1	0.100	0.07107		mg/Kg		71	70 - 130
Ethylbenzene	<0.00201	U F1	0.100	0.07605		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.201	0.1360	F1	mg/Kg		68	70 - 130
o-Xylene	<0.00201	U	0.100	0.09272		mg/Kg		92	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-2795-A-4-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32836 — **Prep Batch: 32833**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0998	0.06774	F1	mg/Kg		68	70 - 130	30	35
Toluene	<0.00201	U F1	0.0998	0.05943	F1	mg/Kg		60	70 - 130	18	35
Ethylbenzene	<0.00201	U F1	0.0998	0.06184	F1	mg/Kg		62	70 - 130	21	35
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1129	F1	mg/Kg		57	70 - 130	19	35
o-Xylene	<0.00201	U	0.0998	0.07382		mg/Kg		74	70 - 130	23	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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

Lab Sample ID: MB 880-32175/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32121 — **Prep Batch: 32175**

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		08/15/22 13:57	08/15/22 20:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/15/22 13:57	08/15/22 20:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/15/22 13:57	08/15/22 20:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	08/15/22 13:57	08/15/22 20:31	1
o-Terphenyl	98		70 - 130	08/15/22 13:57	08/15/22 20:31	1

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: LCS 880-32175/2-A
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32175

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	986.1		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1108		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*125*		*70 - 130*

Lab Sample ID: LCSD 880-32175/3-A
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32175

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	960.2		mg/Kg		96	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1017		mg/Kg		102	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: 880-18072-A-1-B MS
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32175

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	953.5		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	690.5	F1	mg/Kg		69	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Lab Sample ID: 880-18072-A-1-C MSD
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32175

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	968.8		mg/Kg		97	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	698.1		mg/Kg		70	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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

Lab Sample ID: 880-18072-A-1-C MSD
Matrix: Solid
Analysis Batch: 32121

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32175

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	79		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-32339/1-A
Matrix: Solid
Analysis Batch: 32436

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			08/18/22 22:22	1

Lab Sample ID: LCS 880-32339/2-A
Matrix: Solid
Analysis Batch: 32436

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-32339/3-A
Matrix: Solid
Analysis Batch: 32436

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	243.2		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 880-17981-A-1-C MS
Matrix: Solid
Analysis Batch: 32436

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	855	F1	248	1192	F1	mg/Kg		136	90 - 110		

Lab Sample ID: 880-17981-A-1-D MSD
Matrix: Solid
Analysis Batch: 32436

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	855	F1	248	1138	F1	mg/Kg		114	90 - 110	5	20

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

GC VOA

Prep Batch: 32546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-32546/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 32557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8021B	32561
MB 880-32546/5-A	Method Blank	Total/NA	Solid	8021B	32546
MB 880-32561/5-A	Method Blank	Total/NA	Solid	8021B	32561
LCS 880-32561/1-A	Lab Control Sample	Total/NA	Solid	8021B	32561
LCSD 880-32561/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32561
880-18346-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	32561
880-18346-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32561

Prep Batch: 32561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	5035	
MB 880-32561/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32561/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32561/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-18346-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
880-18346-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 32623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	Total BTEX	
890-2746-2	SS02	Total/NA	Solid	Total BTEX	
890-2746-3	SS03	Total/NA	Solid	Total BTEX	
890-2746-4	SS04	Total/NA	Solid	Total BTEX	
890-2746-5	SS05	Total/NA	Solid	Total BTEX	
890-2746-6	SS06	Total/NA	Solid	Total BTEX	
890-2746-7	SS07	Total/NA	Solid	Total BTEX	

Prep Batch: 32772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-32772/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 32833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-2	SS02	Total/NA	Solid	5035	
890-2746-3	SS03	Total/NA	Solid	5035	
890-2746-4	SS04	Total/NA	Solid	5035	
890-2746-5	SS05	Total/NA	Solid	5035	
890-2746-6	SS06	Total/NA	Solid	5035	
890-2746-7	SS07	Total/NA	Solid	5035	
MB 880-32833/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32833/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32833/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2795-A-4-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2795-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

GC VOA

Analysis Batch: 32836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-2	SS02	Total/NA	Solid	8021B	32833
890-2746-3	SS03	Total/NA	Solid	8021B	32833
890-2746-4	SS04	Total/NA	Solid	8021B	32833
890-2746-5	SS05	Total/NA	Solid	8021B	32833
890-2746-6	SS06	Total/NA	Solid	8021B	32833
890-2746-7	SS07	Total/NA	Solid	8021B	32833
MB 880-32772/5-A	Method Blank	Total/NA	Solid	8021B	32772
MB 880-32833/5-A	Method Blank	Total/NA	Solid	8021B	32833
LCS 880-32833/1-A	Lab Control Sample	Total/NA	Solid	8021B	32833
LCSD 880-32833/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32833
890-2795-A-4-D MS	Matrix Spike	Total/NA	Solid	8021B	32833
890-2795-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32833

GC Semi VOA

Analysis Batch: 32121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8015B NM	32175
890-2746-2	SS02	Total/NA	Solid	8015B NM	32175
890-2746-3	SS03	Total/NA	Solid	8015B NM	32175
890-2746-4	SS04	Total/NA	Solid	8015B NM	32175
890-2746-5	SS05	Total/NA	Solid	8015B NM	32175
890-2746-6	SS06	Total/NA	Solid	8015B NM	32175
890-2746-7	SS07	Total/NA	Solid	8015B NM	32175
MB 880-32175/1-A	Method Blank	Total/NA	Solid	8015B NM	32175
LCS 880-32175/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32175
LCSD 880-32175/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32175
880-18072-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	32175
880-18072-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32175

Prep Batch: 32175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8015NM Prep	
890-2746-2	SS02	Total/NA	Solid	8015NM Prep	
890-2746-3	SS03	Total/NA	Solid	8015NM Prep	
890-2746-4	SS04	Total/NA	Solid	8015NM Prep	
890-2746-5	SS05	Total/NA	Solid	8015NM Prep	
890-2746-6	SS06	Total/NA	Solid	8015NM Prep	
890-2746-7	SS07	Total/NA	Solid	8015NM Prep	
MB 880-32175/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32175/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32175/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-18072-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-18072-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 32213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Total/NA	Solid	8015 NM	
890-2746-2	SS02	Total/NA	Solid	8015 NM	
890-2746-3	SS03	Total/NA	Solid	8015 NM	
890-2746-4	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

GC Semi VOA (Continued)

Analysis Batch: 32213 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-5	SS05	Total/NA	Solid	8015 NM	
890-2746-6	SS06	Total/NA	Solid	8015 NM	
890-2746-7	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 32339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Soluble	Solid	DI Leach	
890-2746-2	SS02	Soluble	Solid	DI Leach	
890-2746-3	SS03	Soluble	Solid	DI Leach	
890-2746-4	SS04	Soluble	Solid	DI Leach	
890-2746-5	SS05	Soluble	Solid	DI Leach	
890-2746-6	SS06	Soluble	Solid	DI Leach	
890-2746-7	SS07	Soluble	Solid	DI Leach	
MB 880-32339/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32339/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32339/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17981-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17981-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 32436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2746-1	SS01	Soluble	Solid	300.0	32339
890-2746-2	SS02	Soluble	Solid	300.0	32339
890-2746-3	SS03	Soluble	Solid	300.0	32339
890-2746-4	SS04	Soluble	Solid	300.0	32339
890-2746-5	SS05	Soluble	Solid	300.0	32339
890-2746-6	SS06	Soluble	Solid	300.0	32339
890-2746-7	SS07	Soluble	Solid	300.0	32339
MB 880-32339/1-A	Method Blank	Soluble	Solid	300.0	32339
LCS 880-32339/2-A	Lab Control Sample	Soluble	Solid	300.0	32339
LCSD 880-32339/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32339
880-17981-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	32339
880-17981-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32339

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS01

Lab Sample ID: 890-2746-1
Matrix: Solid
Date Collected: 08/11/22 11:05
Date Received: 08/11/22 15:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	32561	08/20/22 10:39	MR	EET MID
Total/NA	Analysis	8021B		1			32557	08/21/22 09:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 03:24	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 01:35	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-2746-2
Matrix: Solid
Date Collected: 08/11/22 11:10
Date Received: 08/11/22 15:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 08:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 03:44	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:03	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-2746-3
Matrix: Solid
Date Collected: 08/11/22 11:15
Date Received: 08/11/22 15:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 08:49	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 00:03	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:12	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-2746-4
Matrix: Solid
Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 09:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS04

Date Collected: 08/11/22 11:20
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-4
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			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 00:23	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:21	CH	EET MID

Client Sample ID: SS05

Date Collected: 08/11/22 11:25
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-5
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	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 09:29	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 00:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:30	CH	EET MID

Client Sample ID: SS06

Date Collected: 08/11/22 11:30
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-6
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			4.99 g	5 mL	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 09:50	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 01:03	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:39	CH	EET MID

Client Sample ID: SS07

Date Collected: 08/11/22 11:35
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-7
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	32833	08/24/22 10:17	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32836	08/25/22 10:10	MR	EET MID
Total/NA	Analysis	Total BTEX		1			32623	08/22/22 10:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			32213	08/16/22 09:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	32175	08/15/22 13:57	DM	EET MID
Total/NA	Analysis	8015B NM		1			32121	08/16/22 02:44	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Client Sample ID: SS07
Date Collected: 08/11/22 11:35
Date Received: 08/11/22 15:27

Lab Sample ID: 890-2746-7
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			5.05 g	50 mL	32339	08/17/22 09:34	CH	EET MID
Soluble	Analysis	300.0		1			32436	08/19/22 02:49	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: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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	T104704400-22-24	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: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Windward 2H Flare Fire

Job ID: 890-2746-1
SDG: 03D2024080

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2746-1	SS01	Solid	08/11/22 11:05	08/11/22 15:27	0.5
890-2746-2	SS02	Solid	08/11/22 11:10	08/11/22 15:27	0.5
890-2746-3	SS03	Solid	08/11/22 11:15	08/11/22 15:27	0.5
890-2746-4	SS04	Solid	08/11/22 11:20	08/11/22 15:27	0.5
890-2746-5	SS05	Solid	08/11/22 11:25	08/11/22 15:27	0.5
890-2746-6	SS06	Solid	08/11/22 11:30	08/11/22 15:27	0.5
890-2746-7	SS07	Solid	08/11/22 11:35	08/11/22 15:27	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 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
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:	817-683-2503	Email:	kjennings@ensolum.com

Work Order Comments

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

Project Name:	Windward 2H Flare Fire	**Turn Around**	
Project Number:	03D2024080	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Conner Shore	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:	NM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.6
Total Containers:		Corrected Temperature:	5.4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	S	08.11.22	1105	0.5'	G	1		x	x	x
SS02	S	08.11.22	1110	0.5'	G	1		x	x	x
SS03	S	08.11.22	1115	0.5'	G	1		x	x	x
SS04	S	08.11.22	1120	0.5'	G	1		x	x	x
SS05	S	08.11.22	1125	0.5'	G	1		x	x	x
SS06	S	08.11.22	1130	0.5'	G	1		x	x	x
SS07	S	08.11.22	1135	0.5'	G	1		x	x	x

890-2746 Chain of Custody

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		8.1.22 1527			
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2746-1
SDG Number: 03D2024080

Login Number: 2746
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2746-1
SDG Number: 03D2024080

Login Number: 2746
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/15/22 08:36 AM

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

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2910-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Windward 2H

For:
Ensolum
2351 W. Northwest Hwy
Suite 1203
Dallas, Texas 75220

Attn: Joe Gable

JKramer

Authorized for release by:
9/21/2022 5:14:19 PM

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

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

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

Client: Ensolum
Project/Site: Windward 2H

Laboratory Job ID: 890-2910-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Job ID: 890-2910-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2910-1

Receipt
The samples were received on 9/9/2022 9:22 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-34858 and analytical batch 880-34895 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA
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: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-2910-1
Matrix: Solid
Date Collected: 09/09/22 10:00
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 08:25	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/19/22 15:06	09/21/22 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:25*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/21/22 15:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**138**		49.8		mg/Kg			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/13/22 08:23	09/13/22 15:20	1
Diesel Range Organics (Over C10-C28)	**138**		49.8		mg/Kg		09/13/22 08:23	09/13/22 15:20	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/13/22 08:23	09/13/22 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:20*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.13**		4.97		mg/Kg			09/14/22 09:56	1

Client Sample ID: BH01

Lab Sample ID: 890-2910-2
Matrix: Solid
Date Collected: 09/09/22 10:05
Date Received: 09/09/22 09:22
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/19/22 15:06	09/21/22 08:45	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/19/22 15:06	09/21/22 08:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:45*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-2910-2
Matrix: Solid
Date Collected: 09/09/22 10:05
Date Received: 09/09/22 09:22
Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*09/19/22 15:06*	*09/21/22 08:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			09/21/22 15:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/13/22 08:23	09/13/22 15:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/13/22 08:23	09/13/22 15:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/13/22 08:23	09/13/22 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*100*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:41*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 15:41*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24.7**		4.99	mg/Kg			09/14/22 10:01	1

Client Sample ID: BH02

Lab Sample ID: 890-2910-3
Matrix: Solid
Date Collected: 09/09/22 10:10
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/19/22 15:06	09/21/22 10:36	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/19/22 15:06	09/21/22 10:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:36*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH02
Date Collected: 09/09/22 10:10
Date Received: 09/09/22 09:22
Sample Depth: 1

Lab Sample ID: 890-2910-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:02*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.9**		5.03		mg/Kg			09/14/22 10:05	1

Client Sample ID: BH02
Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22
Sample Depth: 2

Lab Sample ID: 890-2910-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 10:56	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 10:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:56*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/19/22 15:06*	*09/21/22 10:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:22*	*1*
o-Terphenyl	*98*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:22*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH02

Lab Sample ID: 890-2910-4
Matrix: Solid
Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22
Sample Depth: 2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.3		5.01		mg/Kg			09/14/22 10:10	1

Client Sample ID: BH03

Lab Sample ID: 890-2910-5
Matrix: Solid
Date Collected: 09/09/22 10:20
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/19/22 15:06	09/21/22 11:17	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/19/22 15:06	09/21/22 11:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:17*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:17*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:43*	*1*
o-Terphenyl	*97*		*70 - 130*	*09/13/22 08:23*	*09/13/22 16:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.7		4.99		mg/Kg			09/14/22 10:15	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH03

Date Collected: 09/09/22 10:30
Date Received: 09/09/22 09:22
Sample Depth: 2

Lab Sample ID: 890-2910-6

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/19/22 15:06	09/21/22 11:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/19/22 15:06	09/21/22 11:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:37*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*09/19/22 15:06*	*09/21/22 11:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/21/22 15:17	1

Method: 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			09/14/22 08:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 17:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 17:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:04*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.8**		4.98		mg/Kg			09/14/22 10:20	1

Surrogate Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-19019-A-1-E MS	Matrix Spike	117	114
880-19019-A-1-F MSD	Matrix Spike Duplicate	92	112
890-2910-1	BH01	82	116
890-2910-2	BH01	101	108
890-2910-3	BH02	96	110
890-2910-4	BH02	90	112
890-2910-5	BH03	100	117
890-2910-6	BH03	85	110
LCS 880-34858/1-A	Lab Control Sample	91	102
LCSD 880-34858/2-A	Lab Control Sample Dup	94	103
MB 880-34692/5-A	Method Blank	102	116
MB 880-34858/5-A	Method Blank	104	116

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2910-1	BH01	98	102
890-2910-2	BH01	100	102
890-2910-3	BH02	102	106
890-2910-4	BH02	93	98
890-2910-5	BH03	93	97
890-2910-6	BH03	92	94
890-2914-A-1-D MS	Matrix Spike	91	87
890-2914-A-1-E MSD	Matrix Spike Duplicate	95	91
LCS 880-34341/2-A	Lab Control Sample	74	84
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88
MB 880-34341/1-A	Method Blank	102	114

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34692/5-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34692

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/16/22 16:15	09/20/22 17:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/16/22 16:15	09/20/22 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/16/22 16:15*	*09/20/22 17:37*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/16/22 16:15*	*09/20/22 17:37*	*1*

Lab Sample ID: MB 880-34858/5-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34858

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 15:06	09/21/22 05:13	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 15:06	09/21/22 05:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/19/22 15:06*	*09/21/22 05:13*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*09/19/22 15:06*	*09/21/22 05:13*	*1*

Lab Sample ID: LCS 880-34858/1-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34858

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09802		mg/Kg		98	70 - 130		
Toluene			0.100	0.08583		mg/Kg		86	70 - 130		
Ethylbenzene			0.100	0.08534		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1780		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.08903		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-34858/2-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34858

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09393		mg/Kg		94	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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

Lab Sample ID: LCSD 880-34858/2-A
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34858

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08451		mg/Kg		85	70 - 130	2	35
Ethylbenzene			0.100	0.08316		mg/Kg		83	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1731		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.08797		mg/Kg		88	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-19019-A-1-E MS
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34858

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F2 F1	0.0998	0.04876	F1	mg/Kg		49	70 - 130
Toluene	<0.00201	U F2 F1	0.0998	0.04594	F1	mg/Kg		46	70 - 130
Ethylbenzene	<0.00201	U F2 F1	0.0998	0.04536	F1	mg/Kg		45	70 - 130
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.200	0.09537	F1	mg/Kg		48	70 - 130
o-Xylene	<0.00201	U F2 F1	0.0998	0.05511	F1	mg/Kg		55	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-19019-A-1-F MSD
Matrix: Solid
Analysis Batch: 34895

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34858

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F2 F1	0.0990	0.1026	F2	mg/Kg		104	70 - 130	71	35
Toluene	<0.00201	U F2 F1	0.0990	0.08240	F2	mg/Kg		83	70 - 130	57	35
Ethylbenzene	<0.00201	U F2 F1	0.0990	0.07768	F2	mg/Kg		78	70 - 130	53	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.198	0.1614	F2	mg/Kg		82	70 - 130	51	35
o-Xylene	<0.00201	U F2 F1	0.0990	0.08266	F2	mg/Kg		83	70 - 130	40	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-34341/1-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34341

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		09/13/22 08:23	09/13/22 09:38	1

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-34341/1-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34341

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		09/13/22 08:23	09/13/22 09:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*
o-Terphenyl	*114*		*70 - 130*	*09/13/22 08:23*	*09/13/22 09:38*	*1*

Lab Sample ID: LCS 880-34341/2-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34341

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	948.0		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	846.8		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-34341/3-A
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34341

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	893.7		mg/Kg		89	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	800.1		mg/Kg		80	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 890-2914-A-1-D MS
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34341

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	996	827.2		mg/Kg		80	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	738.7		mg/Kg		74	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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

Lab Sample ID: 890-2914-A-1-E MSD
Matrix: Solid
Analysis Batch: 34338

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34341

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	867.5		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	783.4		mg/Kg		78	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34104/1-A
Matrix: Solid
Analysis Batch: 34474

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			09/14/22 08:57	1

Lab Sample ID: LCS 880-34104/2-A
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	238.3		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-34104/3-A
Matrix: Solid
Analysis Batch: 34474

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	238.8		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-2910-6 MS
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	70.8		249	319.6		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2910-6 MSD
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: BH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	70.8		249	319.0		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

GC VOA

Prep Batch: 34692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34692/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	5035	
890-2910-2	BH01	Total/NA	Solid	5035	
890-2910-3	BH02	Total/NA	Solid	5035	
890-2910-4	BH02	Total/NA	Solid	5035	
890-2910-5	BH03	Total/NA	Solid	5035	
890-2910-6	BH03	Total/NA	Solid	5035	
MB 880-34858/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-19019-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-19019-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8021B	34858
890-2910-2	BH01	Total/NA	Solid	8021B	34858
890-2910-3	BH02	Total/NA	Solid	8021B	34858
890-2910-4	BH02	Total/NA	Solid	8021B	34858
890-2910-5	BH03	Total/NA	Solid	8021B	34858
890-2910-6	BH03	Total/NA	Solid	8021B	34858
MB 880-34692/5-A	Method Blank	Total/NA	Solid	8021B	34692
MB 880-34858/5-A	Method Blank	Total/NA	Solid	8021B	34858
LCS 880-34858/1-A	Lab Control Sample	Total/NA	Solid	8021B	34858
LCSD 880-34858/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34858
880-19019-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	34858
880-19019-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34858

Analysis Batch: 35087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	Total BTEX	
890-2910-2	BH01	Total/NA	Solid	Total BTEX	
890-2910-3	BH02	Total/NA	Solid	Total BTEX	
890-2910-4	BH02	Total/NA	Solid	Total BTEX	
890-2910-5	BH03	Total/NA	Solid	Total BTEX	
890-2910-6	BH03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8015B NM	34341
890-2910-2	BH01	Total/NA	Solid	8015B NM	34341
890-2910-3	BH02	Total/NA	Solid	8015B NM	34341
890-2910-4	BH02	Total/NA	Solid	8015B NM	34341
890-2910-5	BH03	Total/NA	Solid	8015B NM	34341
890-2910-6	BH03	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

GC Semi VOA (Continued)

Analysis Batch: 34338 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	34341
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8015NM Prep	
890-2910-2	BH01	Total/NA	Solid	8015NM Prep	
890-2910-3	BH02	Total/NA	Solid	8015NM Prep	
890-2910-4	BH02	Total/NA	Solid	8015NM Prep	
890-2910-5	BH03	Total/NA	Solid	8015NM Prep	
890-2910-6	BH03	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Total/NA	Solid	8015 NM	
890-2910-2	BH01	Total/NA	Solid	8015 NM	
890-2910-3	BH02	Total/NA	Solid	8015 NM	
890-2910-4	BH02	Total/NA	Solid	8015 NM	
890-2910-5	BH03	Total/NA	Solid	8015 NM	
890-2910-6	BH03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Soluble	Solid	DI Leach	
890-2910-2	BH01	Soluble	Solid	DI Leach	
890-2910-3	BH02	Soluble	Solid	DI Leach	
890-2910-4	BH02	Soluble	Solid	DI Leach	
890-2910-5	BH03	Soluble	Solid	DI Leach	
890-2910-6	BH03	Soluble	Solid	DI Leach	
MB 880-34104/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2910-6 MS	BH03	Soluble	Solid	DI Leach	
890-2910-6 MSD	BH03	Soluble	Solid	DI Leach	

Analysis Batch: 34474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-1	BH01	Soluble	Solid	300.0	34104
890-2910-2	BH01	Soluble	Solid	300.0	34104
890-2910-3	BH02	Soluble	Solid	300.0	34104
890-2910-4	BH02	Soluble	Solid	300.0	34104
890-2910-5	BH03	Soluble	Solid	300.0	34104

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

HPLC/IC (Continued)

Analysis Batch: 34474 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-6	BH03	Soluble	Solid	300.0	34104
MB 880-34104/1-A	Method Blank	Soluble	Solid	300.0	34104
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	300.0	34104
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34104
890-2910-6 MS	BH03	Soluble	Solid	300.0	34104
890-2910-6 MSD	BH03	Soluble	Solid	300.0	34104

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH01
Date Collected: 09/09/22 10:00
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-1
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	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 08:25	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 15:20	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 09:56	CH	EET MID

Client Sample ID: BH01
Date Collected: 09/09/22 10:05
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 08:45	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 15:41	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:01	CH	EET MID

Client Sample ID: BH02
Date Collected: 09/09/22 10:10
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 10:36	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 16:02	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:05	CH	EET MID

Client Sample ID: BH02
Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 10:56	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Client Sample ID: BH02

Date Collected: 09/09/22 10:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-4
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			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 16:22	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:10	CH	EET MID

Client Sample ID: BH03

Date Collected: 09/09/22 10:20
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-5
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			5.04 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 11:17	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 16:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:15	CH	EET MID

Client Sample ID: BH03

Date Collected: 09/09/22 10:30
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2910-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	34858	09/19/22 15:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34895	09/21/22 11:37	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35087	09/21/22 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			34447	09/14/22 08:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 17:04	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:20	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: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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	T104704400-22-24	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: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2910-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2910-1	BH01	Solid	09/09/22 10:00	09/09/22 09:22	1
890-2910-2	BH01	Solid	09/09/22 10:05	09/09/22 09:22	2
890-2910-3	BH02	Solid	09/09/22 10:10	09/09/22 09:22	1
890-2910-4	BH02	Solid	09/09/22 10:15	09/09/22 09:22	2
890-2910-5	BH03	Solid	09/09/22 10:20	09/09/22 09:22	1
890-2910-6	BH03	Solid	09/09/22 10:30	09/09/22 09:22	2

Chain of Custody

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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

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Work Order No: _____

Project Manager:	Joe Gable	Bill to: (if different)	Joe Gable
Company Name:	Ensolum	Company Name:	Ensolum
Address:	3122 National Parks Hwy.	Address:	3122 National Parks Hwy.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	903-386-6073	Email:	jgable@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:	Windward 2H	Turn Around	
Project Number:	03D2024080	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	5 Day TAT
Sampler's Name:	Liz Cheli	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	N/A		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	NM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4	
Total Containers:		Corrected Temperature:	1.2	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
BH01	S	9/9/2022	1000	1'	Grab/	1		x	x	x
BH01	S	9/9/2022	1005	2'	Grab/	1		x	x	x
BH02	S	9/9/2022	1010	1'	Grab/	1		x	x	x
BH02	S	9/9/2022	1015	2'	Grab/	1		x	x	x
BH03	S	9/9/2022	1020	1'	Grab/	1		x	x	x
BH03	S	9/9/2022	1030	2'	Grab/	1		x	x	x

Parameters

ANALYSIS REQUEST

890-2910 Chain of Custody

Preservative Codes

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

Sample Comments

Incident number: NAPP2222347897

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		9-9-22 922	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2910-1
SDG Number: Lea County NM

Login Number: 2910
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2910-1
SDG Number: Lea County NM

Login Number: 2910
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 AM

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

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2911-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Windward 2H

For:
Ensolum
2351 W. Northwest Hwy
Suite 1203
Dallas, Texas 75220

Attn: Joe Gable

JKramer

Authorized for release by:
9/22/2022 4:43:07 PM

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

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

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

Client: Ensolum
Project/Site: Windward 2H

Laboratory Job ID: 890-2911-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Job ID: 890-2911-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2911-1

Receipt
The samples were received on 9/9/2022 9:22 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): FS01 (890-2911-1), FS02 (890-2911-2), FS03 (890-2911-3), FS04 (890-2911-4), FS05 (890-2911-5), FS06 (890-2911-6), FS07 (890-2911-7) and FS08 (890-2911-8). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
samples were taken on 9-8-22 not 9-9-22

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34943 and analytical batch 880-35129 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-2911-A-1-F MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

HPLC/IC
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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS01

Lab Sample ID: 890-2911-1
Matrix: Solid
Date Collected: 09/08/22 12:45
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
Toluene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
Ethylbenzene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.00399		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
o-Xylene	<0.00200	U F2 F1	0.00200		mg/Kg		09/20/22 13:33	09/22/22 12:02	1
Xylenes, Total	<0.00399	U F2 F1	0.00399		mg/Kg		09/20/22 13:33	09/22/22 12:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:02*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:02*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 17:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 17:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:28*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.8**		4.95		mg/Kg			09/14/22 10:34	1

Client Sample ID: FS02

Lab Sample ID: 890-2911-2
Matrix: Solid
Date Collected: 09/08/22 12:50
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 12:23	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:23*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS02

Lab Sample ID: 890-2911-2
Matrix: Solid

Date Collected: 09/08/22 12:50
Date Received: 09/09/22 09:22
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:23*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/12/22 08:43	09/12/22 17:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/12/22 08:43	09/12/22 17:49	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/12/22 08:43	09/12/22 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:49*	*1*
o-Terphenyl	*94*		*70 - 130*	*09/12/22 08:43*	*09/12/22 17:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.1**		5.00	mg/Kg			09/14/22 10:39	1

Client Sample ID: FS03

Lab Sample ID: 890-2911-3
Matrix: Solid

Date Collected: 09/08/22 13:00
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
Toluene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		09/20/22 13:33	09/22/22 12:43	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		09/20/22 13:33	09/22/22 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:43*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*09/20/22 13:33*	*09/22/22 12:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS03

Lab Sample ID: 890-2911-3
Matrix: Solid
Date Collected: 09/08/22 13:00
Date Received: 09/09/22 09:22
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 18:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 18:11	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:11*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.74**		4.99		mg/Kg			09/14/22 10:54	1

Client Sample ID: FS04

Lab Sample ID: 890-2911-4
Matrix: Solid
Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/20/22 13:33	09/22/22 13:04	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/20/22 13:33	09/22/22 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:04*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:04*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/12/22 08:43	09/12/22 18:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/22 08:43	09/12/22 18:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/22 08:43	09/12/22 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:32*	*1*
o-Terphenyl	*97*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS04

Lab Sample ID: 890-2911-4
Matrix: Solid
Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.5		4.96		mg/Kg			09/14/22 10:59	1

Client Sample ID: FS05

Lab Sample ID: 890-2911-5
Matrix: Solid
Date Collected: 09/08/22 13:50
Date Received: 09/09/22 09:22
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/20/22 13:33	09/22/22 13:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/20/22 13:33	09/22/22 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:24*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/22/22 13:52	1

Method: 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			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/12/22 08:43	09/12/22 18:54	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/12/22 08:43	09/12/22 18:54	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/12/22 08:43	09/12/22 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:54*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 18:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60.5		5.04		mg/Kg			09/14/22 11:04	1

Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS06

Lab Sample ID: 890-2911-6
Matrix: Solid
Date Collected: 09/08/22 14:00
Date Received: 09/09/22 09:22
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 13:45	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/20/22 13:33	09/22/22 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:45*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*09/20/22 13:33*	*09/22/22 13:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**141**		50.0		mg/Kg			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:15	1
Diesel Range Organics (Over C10-C28)	**141**		50.0		mg/Kg		09/12/22 08:43	09/12/22 19:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:15*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33.1**		5.05		mg/Kg			09/14/22 11:08	1

Client Sample ID: FS07

Lab Sample ID: 890-2911-7
Matrix: Solid
Date Collected: 09/08/22 14:10
Date Received: 09/09/22 09:22
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/20/22 13:33	09/22/22 14:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/20/22 13:33	09/22/22 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*09/20/22 13:33*	*09/22/22 14:05*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS07

Lab Sample ID: 890-2911-7
Matrix: Solid
Date Collected: 09/08/22 14:10
Date Received: 09/09/22 09:22
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/20/22 13:33*	*09/22/22 14:05*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**931**		49.9	mg/Kg			09/13/22 09:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/12/22 08:43	09/12/22 19:37	1
Diesel Range Organics (Over C10-C28)	**931**		49.9	mg/Kg		09/12/22 08:43	09/12/22 19:37	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/12/22 08:43	09/12/22 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:37*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.8**		4.97	mg/Kg			09/14/22 11:13	1

Client Sample ID: FS08

Lab Sample ID: 890-2911-8
Matrix: Solid
Date Collected: 09/08/22 14:20
Date Received: 09/09/22 09:22
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/20/22 13:33	09/22/22 16:30	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/20/22 13:33	09/22/22 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*09/20/22 13:33*	*09/22/22 16:30*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/20/22 13:33*	*09/22/22 16:30*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/22/22 13:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**148**		50.0	mg/Kg			09/13/22 09:59	1

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Client Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS08

Date Collected: 09/08/22 14:20
Date Received: 09/09/22 09:22
Sample Depth: 0.5

Lab Sample ID: 890-2911-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:58	1
Diesel Range Organics (Over C10-C28)	**148**		50.0		mg/Kg		09/12/22 08:43	09/12/22 19:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:58*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/12/22 08:43*	*09/12/22 19:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.3**		5.00		mg/Kg			09/14/22 11:18	1

Surrogate Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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)
890-2911-1	FS01	98	79
890-2911-1 MS	FS01	134 S1+	102
890-2911-1 MSD	FS01	112	74
890-2911-2	FS02	110	82
890-2911-3	FS03	115	88
890-2911-4	FS04	123	112
890-2911-5	FS05	107	81
890-2911-6	FS06	113	83
890-2911-7	FS07	111	86
890-2911-8	FS08	112	93
LCS 880-34943/1-A	Lab Control Sample	115	107
LCSD 880-34943/2-A	Lab Control Sample Dup	115	109
MB 880-34943/5-A	Method Blank	101	85

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)
890-2904-A-1-E MS	Matrix Spike	111	93
890-2904-A-1-F MSD	Matrix Spike Duplicate	114	95
890-2911-1	FS01	119	107
890-2911-2	FS02	101	94
890-2911-3	FS03	102	92
890-2911-4	FS04	109	97
890-2911-5	FS05	118	105
890-2911-6	FS06	120	105
890-2911-7	FS07	120	105
890-2911-8	FS08	106	92
LCS 880-34180/2-A	Lab Control Sample	117	117
LCSD 880-34180/3-A	Lab Control Sample Dup	119	121
MB 880-34180/1-A	Method Blank	106	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34943/5-A
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34943

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/20/22 13:33	09/22/22 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/20/22 13:33	09/22/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/20/22 13:33*	*09/22/22 11:41*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*09/20/22 13:33*	*09/22/22 11:41*	*1*

Lab Sample ID: LCS 880-34943/1-A
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34943

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1008		mg/Kg		101	70 - 130		
Toluene			0.100	0.09064		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.09612		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.1960		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.1139		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-34943/2-A
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34943

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09785		mg/Kg		98	70 - 130	3	35
Toluene			0.100	0.08600		mg/Kg		86	70 - 130	5	35
Ethylbenzene			0.100	0.09015		mg/Kg		90	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1817		mg/Kg		91	70 - 130	8	35
o-Xylene			0.100	0.1054		mg/Kg		105	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-2911-1 MS
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34943

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F2 F1	0.0998	0.05776	F1	mg/Kg		58	70 - 130		
Toluene	<0.00200	U F2 F1	0.0998	0.05516	F1	mg/Kg		55	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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

Lab Sample ID: 890-2911-1 MS
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34943

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.06394	F1	mg/Kg		64	70 - 130
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.200	0.1274	F1	mg/Kg		64	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0998	0.07919		mg/Kg		79	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-2911-1 MSD
Matrix: Solid
Analysis Batch: 35129

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 34943

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1	0.100	0.02841	F2 F1	mg/Kg		28	70 - 130	68	35
Toluene	<0.00200	U F2 F1	0.100	0.03755	F2 F1	mg/Kg		37	70 - 130	38	35
Ethylbenzene	<0.00200	U F2 F1	0.100	0.04302	F2 F1	mg/Kg		43	70 - 130	39	35
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.201	0.07806	F2 F1	mg/Kg		39	70 - 130	48	35
o-Xylene	<0.00200	U F2 F1	0.100	0.05038	F2 F1	mg/Kg		50	70 - 130	44	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*

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

Lab Sample ID: MB 880-34180/1-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34180

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		09/12/22 08:43	09/12/22 10:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 10:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/22 08:43	09/12/22 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*09/12/22 08:43*	*09/12/22 10:56*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/12/22 08:43*	*09/12/22 10:56*	*1*

Lab Sample ID: LCS 880-34180/2-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34180

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	902.7		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1104		mg/Kg		110	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-34180/2-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34180

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

Lab Sample ID: LCSD 880-34180/3-A
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34180

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	819.5		mg/Kg		82	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1035		mg/Kg		103	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	121		70 - 130

Lab Sample ID: 890-2904-A-1-E MS
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34180

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	815.3		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	111		997	838.4		mg/Kg		73	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 890-2904-A-1-F MSD
Matrix: Solid
Analysis Batch: 34169

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34180

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	850.4		mg/Kg		85	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	111		999	875.8		mg/Kg		77	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	95		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34104/1-A
Matrix: Solid
Analysis Batch: 34474

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			09/14/22 08:57	1

Lab Sample ID: LCS 880-34104/2-A
Matrix: Solid
Analysis Batch: 34474

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	238.3		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-34104/3-A
Matrix: Solid
Analysis Batch: 34474

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	238.8		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-2910-A-6-B MS
Matrix: Solid
Analysis Batch: 34474

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	70.8		249	319.6		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2910-A-6-C MSD
Matrix: Solid
Analysis Batch: 34474

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	70.8		249	319.0		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

GC VOA

Prep Batch: 34943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	5035	
890-2911-2	FS02	Total/NA	Solid	5035	
890-2911-3	FS03	Total/NA	Solid	5035	
890-2911-4	FS04	Total/NA	Solid	5035	
890-2911-5	FS05	Total/NA	Solid	5035	
890-2911-6	FS06	Total/NA	Solid	5035	
890-2911-7	FS07	Total/NA	Solid	5035	
890-2911-8	FS08	Total/NA	Solid	5035	
MB 880-34943/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34943/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34943/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2911-1 MS	FS01	Total/NA	Solid	5035	
890-2911-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 35129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8021B	34943
890-2911-2	FS02	Total/NA	Solid	8021B	34943
890-2911-3	FS03	Total/NA	Solid	8021B	34943
890-2911-4	FS04	Total/NA	Solid	8021B	34943
890-2911-5	FS05	Total/NA	Solid	8021B	34943
890-2911-6	FS06	Total/NA	Solid	8021B	34943
890-2911-7	FS07	Total/NA	Solid	8021B	34943
890-2911-8	FS08	Total/NA	Solid	8021B	34943
MB 880-34943/5-A	Method Blank	Total/NA	Solid	8021B	34943
LCS 880-34943/1-A	Lab Control Sample	Total/NA	Solid	8021B	34943
LCSD 880-34943/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34943
890-2911-1 MS	FS01	Total/NA	Solid	8021B	34943
890-2911-1 MSD	FS01	Total/NA	Solid	8021B	34943

Analysis Batch: 35182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	Total BTEX	
890-2911-2	FS02	Total/NA	Solid	Total BTEX	
890-2911-3	FS03	Total/NA	Solid	Total BTEX	
890-2911-4	FS04	Total/NA	Solid	Total BTEX	
890-2911-5	FS05	Total/NA	Solid	Total BTEX	
890-2911-6	FS06	Total/NA	Solid	Total BTEX	
890-2911-7	FS07	Total/NA	Solid	Total BTEX	
890-2911-8	FS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8015B NM	34180
890-2911-2	FS02	Total/NA	Solid	8015B NM	34180
890-2911-3	FS03	Total/NA	Solid	8015B NM	34180
890-2911-4	FS04	Total/NA	Solid	8015B NM	34180
890-2911-5	FS05	Total/NA	Solid	8015B NM	34180
890-2911-6	FS06	Total/NA	Solid	8015B NM	34180

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

GC Semi VOA (Continued)

Analysis Batch: 34169 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-7	FS07	Total/NA	Solid	8015B NM	34180
890-2911-8	FS08	Total/NA	Solid	8015B NM	34180
MB 880-34180/1-A	Method Blank	Total/NA	Solid	8015B NM	34180
LCS 880-34180/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34180
LCSD 880-34180/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34180
890-2904-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	34180
890-2904-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34180

Prep Batch: 34180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8015NM Prep	
890-2911-2	FS02	Total/NA	Solid	8015NM Prep	
890-2911-3	FS03	Total/NA	Solid	8015NM Prep	
890-2911-4	FS04	Total/NA	Solid	8015NM Prep	
890-2911-5	FS05	Total/NA	Solid	8015NM Prep	
890-2911-6	FS06	Total/NA	Solid	8015NM Prep	
890-2911-7	FS07	Total/NA	Solid	8015NM Prep	
890-2911-8	FS08	Total/NA	Solid	8015NM Prep	
MB 880-34180/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34180/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34180/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2904-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2904-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Total/NA	Solid	8015 NM	
890-2911-2	FS02	Total/NA	Solid	8015 NM	
890-2911-3	FS03	Total/NA	Solid	8015 NM	
890-2911-4	FS04	Total/NA	Solid	8015 NM	
890-2911-5	FS05	Total/NA	Solid	8015 NM	
890-2911-6	FS06	Total/NA	Solid	8015 NM	
890-2911-7	FS07	Total/NA	Solid	8015 NM	
890-2911-8	FS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Soluble	Solid	DI Leach	
890-2911-2	FS02	Soluble	Solid	DI Leach	
890-2911-3	FS03	Soluble	Solid	DI Leach	
890-2911-4	FS04	Soluble	Solid	DI Leach	
890-2911-5	FS05	Soluble	Solid	DI Leach	
890-2911-6	FS06	Soluble	Solid	DI Leach	
890-2911-7	FS07	Soluble	Solid	DI Leach	
890-2911-8	FS08	Soluble	Solid	DI Leach	
MB 880-34104/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2910-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

HPLC/IC (Continued)

Leach Batch: 34104 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2910-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2911-1	FS01	Soluble	Solid	300.0	34104
890-2911-2	FS02	Soluble	Solid	300.0	34104
890-2911-3	FS03	Soluble	Solid	300.0	34104
890-2911-4	FS04	Soluble	Solid	300.0	34104
890-2911-5	FS05	Soluble	Solid	300.0	34104
890-2911-6	FS06	Soluble	Solid	300.0	34104
890-2911-7	FS07	Soluble	Solid	300.0	34104
890-2911-8	FS08	Soluble	Solid	300.0	34104
MB 880-34104/1-A	Method Blank	Soluble	Solid	300.0	34104
LCS 880-34104/2-A	Lab Control Sample	Soluble	Solid	300.0	34104
LCSD 880-34104/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34104
890-2910-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	34104
890-2910-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34104

Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS01

Date Collected: 09/08/22 12:45
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 12:02	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 17:28	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:34	CH	EET MID

Client Sample ID: FS02

Date Collected: 09/08/22 12:50
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-2

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			5.03 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 12:23	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 17:49	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:39	CH	EET MID

Client Sample ID: FS03

Date Collected: 09/08/22 13:00
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-3

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			5.05 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 12:43	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 18:11	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:54	CH	EET MID

Client Sample ID: FS04

Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-4

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			5.04 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 13:04	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS04

Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-4

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			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 18:32	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 10:59	CH	EET MID

Client Sample ID: FS05

Date Collected: 09/08/22 13:50
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-5

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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 13:24	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 18:54	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:04	CH	EET MID

Client Sample ID: FS06

Date Collected: 09/08/22 14:00
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-6

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			4.99 g	5 mL	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 13:45	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 19:15	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:08	CH	EET MID

Client Sample ID: FS07

Date Collected: 09/08/22 14:10
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2911-7

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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 14:05	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 19:37	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Client Sample ID: FS07

Lab Sample ID: 890-2911-7
Matrix: Solid
Date Collected: 09/08/22 14:10
Date Received: 09/09/22 09:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:13	CH	EET MID

Client Sample ID: FS08

Lab Sample ID: 890-2911-8
Matrix: Solid
Date Collected: 09/08/22 14:20
Date Received: 09/09/22 09:22

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	34943	09/20/22 13:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35129	09/22/22 16:30	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35182	09/22/22 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			34367	09/13/22 09:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34180	09/12/22 08:43	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34169	09/12/22 19:58	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34104	09/09/22 12:32	KS	EET MID
Soluble	Analysis	300.0		1			34474	09/14/22 11:18	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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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	T104704400-22-24	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: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Windward 2H

Job ID: 890-2911-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2911-1	FS01	Solid	09/08/22 12:45	09/09/22 09:22	1
890-2911-2	FS02	Solid	09/08/22 12:50	09/09/22 09:22	1
890-2911-3	FS03	Solid	09/08/22 13:00	09/09/22 09:22	1
890-2911-4	FS04	Solid	09/08/22 13:15	09/09/22 09:22	1
890-2911-5	FS05	Solid	09/08/22 13:50	09/09/22 09:22	1
890-2911-6	FS06	Solid	09/08/22 14:00	09/09/22 09:22	0.5
890-2911-7	FS07	Solid	09/08/22 14:10	09/09/22 09:22	0.5
890-2911-8	FS08	Solid	09/08/22 14:20	09/09/22 09:22	0.5

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Joe Gable	Bill to: (if different)	Joe Gable
Company Name:	Ensolum	Company Name:	Ensolum
Address:	3122 National Parks Hwy.	Address:	3122 National Parks Hwy.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	903-388-8073	Email:	jgable@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:	Windward 2H	Turn Around	
Project Number:	03D2024080	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	5 Day TAT
Sampler's Name:	Liz Cheli	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	N/A		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
FS01	S	9/9/2022	1245	1'	Comp	1	x	x	x
FS02	S	9/9/2022	1250	1'	Comp	1	x	x	x
FS03	S	9/9/2022	1300	1'	Comp	1	x	x	x
FS04	S	9/9/2022	1315	1'	Comp	1	x	x	x
FS05	S	9/9/2022	1350	1'	Comp	1	x	x	x
FS06	S	9/9/2022	1400	0.5'	Comp	1	x	x	x
FS07	S	9/9/2022	1410	0.5'	Comp	1	x	x	x
FS08	S	9/9/2022	1420	0.5'	Comp	1	x	x	x

ANALYSIS REQUEST

890-2911 Chain of Custody

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

Sample Comments
Incident ID: NAPP2222347897

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		9.9.2022			
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020 2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2911-1
SDG Number: Lea County NM

Login Number: 2911
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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2911-1
SDG Number: Lea County NM

Login Number: 2911
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/12/22 09:08 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Nobui, Jennifer, EMNRD
To: Kalei Jennings
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] COP- Sampling Notification (Week of 09/19/22-09/23/22)
Date: Tuesday, September 20, 2022 10:26:49 AM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Kalei

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.

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Tuesday, September 20, 2022 8:02 AM
To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: Fw: [EXTERNAL] COP- Sampling Notification (Week of 09/19/22-09/23/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Monday, September 19, 2022 8:28 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] COP- Sampling Notification (Week of 09/19/22-09/23/22)

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

All,

COP plans to complete final sampling activities at the following sites the week of September 19, 2022.

Tuesday (9/20/2022)

- Federal 9 Com/ NAPP2218848721
- Windward 4H Flowline/NAPP2218850477
- Windward 2H CTB Flare Fire/NAPP2222347897

Wednesday (9/21/2022)

- -Federal 9 Com/ NAPP2218848721
- Windward 4H Flowline/NAPP2218850477
- Windward 2H CTB Flare Fire/NAPP2222347897

Thursday (9/22/2022)

- Corvo Federal 4/ NAPP2217430297

Thank you,

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

ENSOLUM

APPENDIX F

Final C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name _____ Title: _____

Signature: __ _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

L48 Spill Volume Estimate Form

Facility Name & Number:	WINDWARD 2H CTB
Asset Area:	DBEN
Release Discovery Date & Time:	7/30/2022 9:45AM
Release Type:	Oil
Provide any known details about the event:	FLARE FIRE FROM PRODUCTION K.O. DUMP LINE PLUGGED

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	80.0	20.0	0.10	4	1600.000	0.002	0.593	0.000	0.593
Rectangle B					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
								Total Volume Release:	0.593

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2235445306
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2235445306
District RP	
Facility ID	
Application ID	

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

Printed Name: ___Charles Beauvais_____ Title: _Senior Environmental Engineer_____

Signature:___Charles R. Beauvais II_____ Date: __12/20/2022_____

email: _Charles.R.Beauvais@conocophillips.com _____ Telephone: ___575-988-2043_____

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2235445306
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 12/20/2022

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: Jennifer Nobui Date: 01/17/2023

Printed Name: Jennifer Nobui Title: Environmental Specialist A

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

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

CONDITIONS

Action 168957

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 168957
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please implement 19.15.29.13 NMAC when completing P&A.	1/17/2023