



July 6, 2023

New Mexico Oil Conservation Division

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

**Re: Closure Request
Wilder 28 Federal 001H
Incident Number NAPP2301736973
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of ConocoPhillips Company (COP), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Wilder 28 Federal 001H (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water and crude oil at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, COP is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2301736973.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 28, Township 26 South, Range 32 East, in Lea County, New Mexico (32.0194°, -103.6730°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On January 9, 2023, corrosion caused a hole in a flowline, resulting in the release of approximately 4.82 barrels (bbls) of produced water and 0.71 bbls of crude oil into the adjacent pasture north of the Site. No released fluids were recovered. COP reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on January 17, 2023. The release was assigned Incident Number NAPP2301736973.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess applicability of Table I, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-03595

POD 1 located approximately 0.7 miles northwest of the Site. The groundwater well was drilled during September 2013 and has a reported depth to groundwater of 180 feet bgs and a total depth of 280 feet bgs. United States Geological Survey (USGS) well 320134103384101, located approximately 0.8 miles northwest of the Site, has a reported depth to groundwater of 221.94 feet bgs and a total depth of 405 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 0.8 miles northeast 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 from 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 (medium potential karst designation area). Site receptors are identified on Figure 1.

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture release area that was impacted by the release, per 19.15.29.13.D (1) NMAC.

INITIAL SITE ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On March 20, 2023, Ensolum personnel were at the Site to evaluate the release based on information provided on the Form C-141 and visual observations. Visible surface staining was observed in the pasture release area north of the pad. Ten assessment soil samples (SS01 through SS010) were collected within and around the visible release extent at a depth of 0.5 feet bgs to assess the lateral extent of the release. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and assessment soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

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



Laboratory analytical results for assessment soil samples SS01 through SS04, collected around the release extent, indicated all COC concentrations were compliant with most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for assessment soil samples SS05 through SS10, collected within the release extent, indicated chloride and/or TPH concentrations exceeded the Site Closure Criteria and/or the reclamation requirement. Based on laboratory analytical results for soil samples SS05 through SS10, collected within the release extent, impacted soil was identified and excavation activities were warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between April 17, 2023 and May 4, 2023, Ensolum personnel were at the Site to oversee excavation activities based on surface staining observed in the release area and laboratory analytical results for assessment soil samples SS05 through SS10. Excavation activities were performed via track hoe and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride. The excavation was completed at depths ranging from 1.5 feet to 2 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS17 were collected from the floor of the excavation. Due to the shallow depth of the southern portion of the excavation, the sidewalls were incorporated into the floor samples. Composite soil samples SW01 through SW04 were collected from the sidewalls of the northern portion of the excavation at depths ranging from ground surface to 2 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for excavation samples FS01 through FS05, FS07 through FS17, and SW01 through SW04 indicated all COC concentrations were compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results for floor sample FS06 indicated TPH concentrations exceeded the reclamation requirement and additional excavation was required.

Ensolum personnel returned to the Site on May 4, 2023, to oversee excavation activities to remove additional soil from the floor of the excavation in the vicinity of floor soil sample FS06. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to a depth of 1.75 feet bgs. Upon completion of excavation activities, one 5-point composite soil sample (FS06A) was collected from the floor of the excavation at a depth of 1.75 feet bgs. The soil sample was collected, handled, and analyzed following the same procedure described above.

Laboratory analytical results for excavation floor sample FS06A indicated all COC concentrations were compliant with the reclamation requirement. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

The excavation measured approximately 3,035 square feet in aerial extent. A total of approximately 225 cubic yards of impacted soil was removed during the excavation activities. The soil was transported and properly disposed of at the R360 Disposal Facility in Hobbs, New Mexico. The excavation was secured with fencing.



ConocoPhillips Company
Closure Request
Wilder 28 Federal 001H

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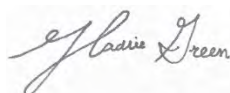
CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the January 9, 2023, release of produced water and crude oil. Laboratory analytical results for the final excavation soil samples indicated all COCs concentrations were compliant with the most stringent Table 1 Closure Criteria. Based on the laboratory analytical results, no further remediation was required. COP will backfill the excavation with material purchased locally, recontour the Site to match pre-existing site conditions, and re-seed the disturbed area with the appropriate BLM seed mixture.

COP believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2301736973. NMOCD notifications are included in Appendix D and the Final C-141 is included in Appendix E.

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

Sincerely,
Ensolum, LLC



Hadlie Green
Project Geologist



Aimee Cole
Senior Managing Scientist

cc: Jacob Laird, ConocoPhillips Company
Bureau of Land Management

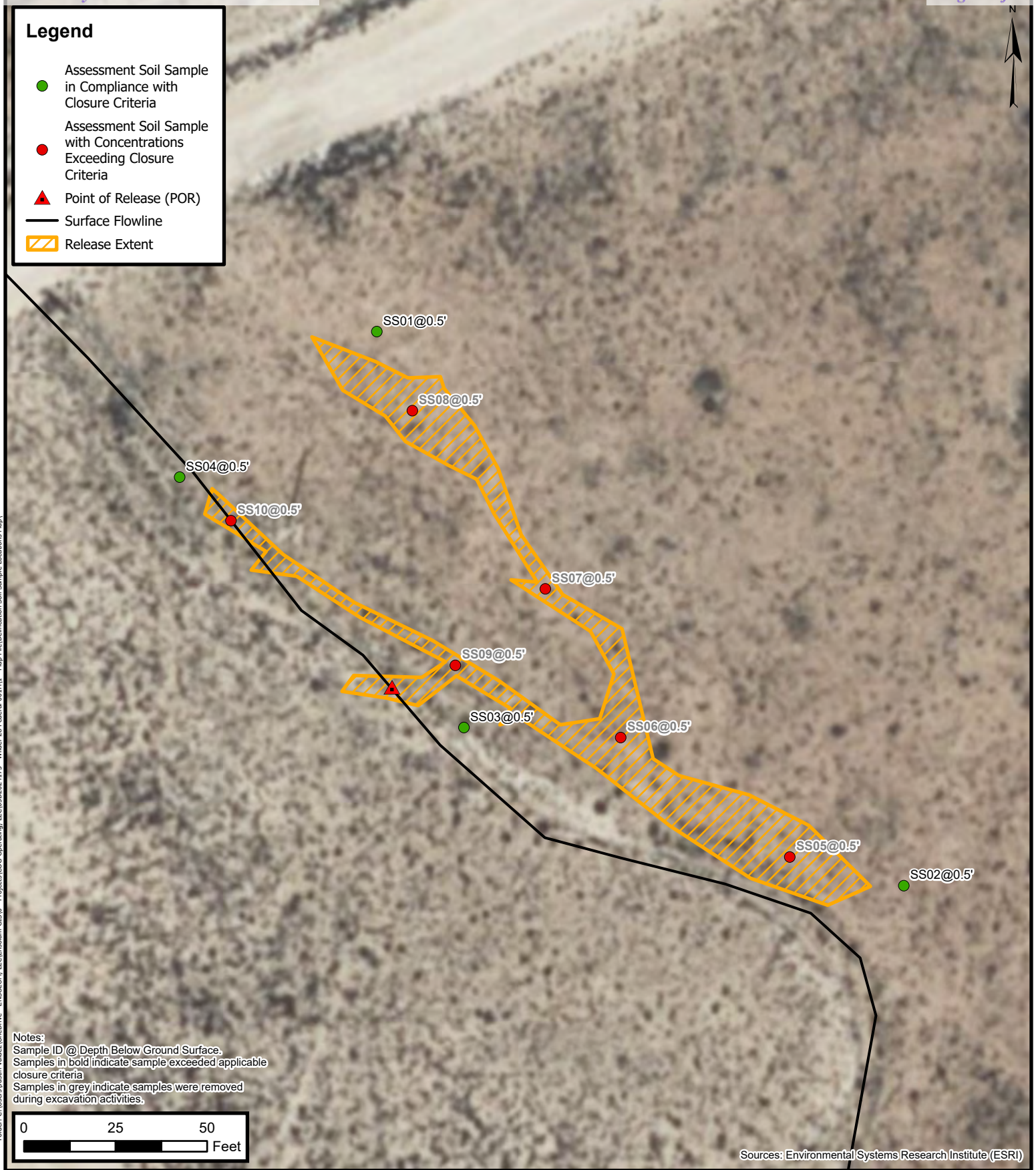
Appendices:

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





FIGURES



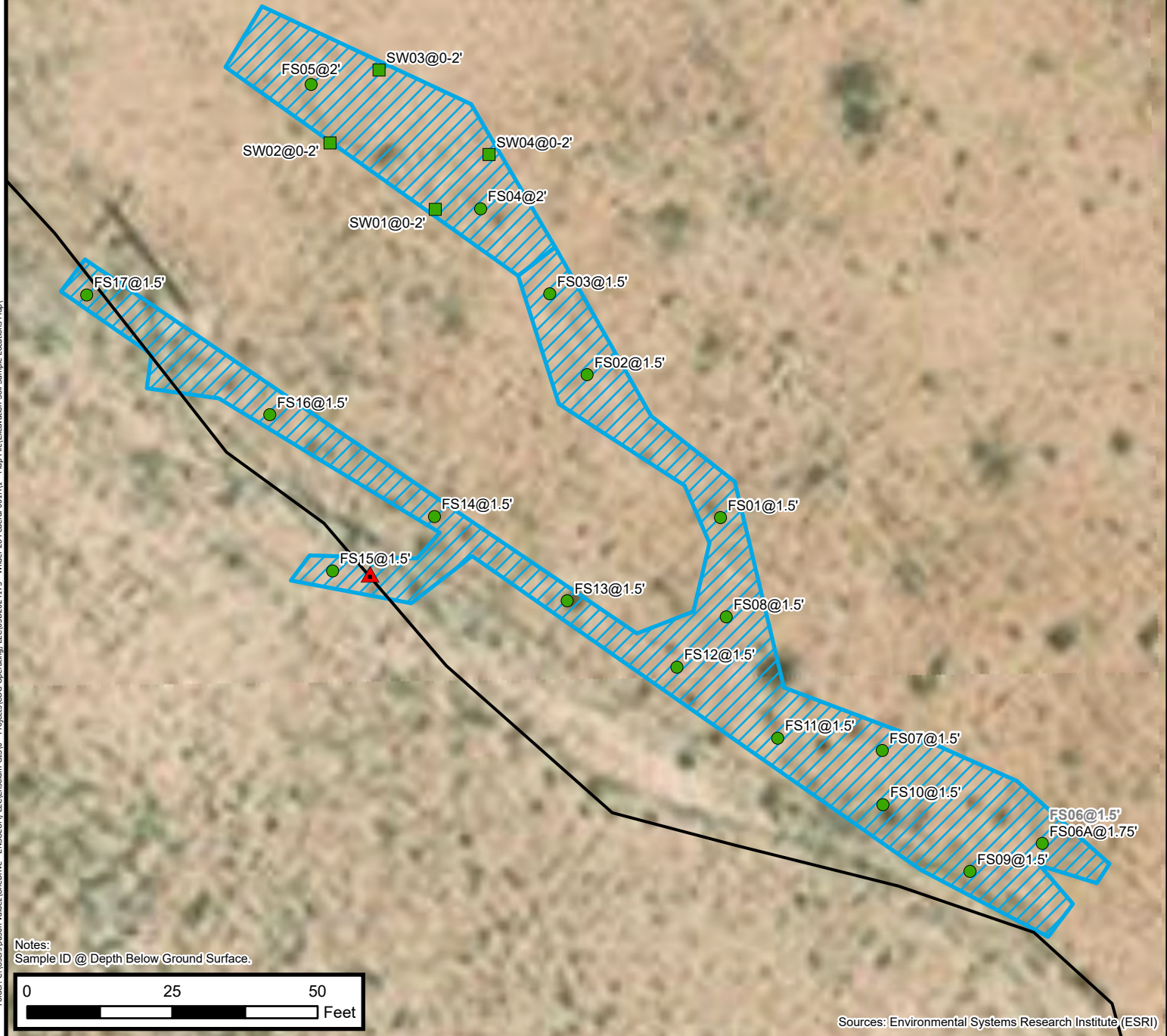
Assessment Soil Sample Locations

ConocoPhillips Company
Wilder 28 Federal 001H
Incident Number: NAPP2301736973
Unit A, Sec 28, T26S, R32E
Lea County, New Mexico

FIGURE
2

Legend

- ▲ Point of Release (POR)
- Excavation Floor Sample in Compliance with Closure Criteria
- Excavation Sidewall Sample in Compliance with Closure Criteria
- Surface Flowline
- Excavation Extent



Excavation Soil Sample Locations

COG Operating, LLC
Wilder 28 Federal 001H
Incident Number: NAPP2301736973
Unit A, Sec 28, T26S, R32E
Lea County, New Mexico

FIGURE

3



TABLES



TABLE I
SOIL SAMPLE ANALYTICAL RESULTS
 Wilder 28 Federal 001H
 ConocoPhillips Company
 Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assessment Soil Samples										
SS01*	03/20/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	51.0
SS02*	03/20/2023	0.5	<0.00201	<0.00402	<50.0	50.5	<50.0	50.5	50.5	126
SS03*	03/20/2023	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	35.8
SS04*	03/20/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	42.1
SS05*	03/20/2023	0.5	<0.00398	45.0	2,930	5,580	<49.9	8,510	8,510	875
SS06*	03/20/2023	0.5	<0.00200	0.0437	80.0	1,120	<50.0	1,200	1,200	3,500
SS07*	03/20/2023	0.5	<0.00201	0.0641	85.7	1,920	<49.9	2,010	2,010	470
SS08*	03/20/2023	0.5	0.630	101	3,900	5,420	<49.9	9,320	9,320	340
SS09*	03/20/2023	0.5	<0.00398	22.7	1,540	3,060	<50.0	4,600	4,600	2,200
SS10*	03/20/2023	0.5	0.132	20.1	3,380	3,620	<49.9	7,000	7,000	44.5
Excavation Floor Soil Samples										
FS01*	04/17/2023	1.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	66.6
FS02*	04/17/2023	1.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	101
FS03*	04/17/2023	1.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	57.3
FS04*	04/17/2023	2	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	64.0
FS05*	04/17/2023	2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	56.5
FS06*	04/18/2023	1.5	<0.00198	<0.00396	<50.0	268	<50.0	268	268	360
FS06A*	05/04/2023	1.75	<0.00200	<0.00401	<49.9	92.8	<49.9	93	92.8	355
FS07*	04/18/2023	1.5	<0.00199	<0.00398	<50.0	74.7	<50.0	74.7	74.7	183
FS08*	04/18/2023	1.5	<0.00199	<0.00398	<50.0	91.3	<50.0	91.3	91.3	468
FS09*	04/18/2023	1.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	52.6
FS10*	04/18/2023	1.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	123
FS11*	04/18/2023	1.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	135
FS12*	04/18/2023	1.5	<0.00199	<0.00398	<49.8	86.5	<49.8	86.5	86.5	375
FS13*	04/18/2023	1.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	135

FS14*	04/18/2023	1.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	115
FS15*	04/18/2023	1.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	67.3
FS16*	04/18/2023	1.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	74.4
FS17*	04/18/2023	1.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	55.3
Excavation Sidewall Soil Samples										
SW01*	04/17/2023	0 - 2	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	79.3
SW02*	04/17/2023	0 - 2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	96.3
SW03*	04/17/2023	0 - 2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	72.3
SW04*	04/17/2023	0 - 2	<0.00199	<0.00398	<49.9	53.9	<49.9	53.9	53.9	41.8

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.**Grey** text represents samples that have been excavated

* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard for TPH in the top 4 feet is 100 mg/kg and chloride in the top 4 feet is 600 mg/kg



APPENDIX A

Referenced Well Records



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

1. GENERAL AND WELL LOCATION	OSB POD NUMBER (WELL NUMBER) C-3595				OSB FILE NUMBER C-3595			
	WELL OWNER NAME(S) Oliver D Kishne				PHONE (OPTIONAL) 432-448-6337			
	WELL OWNER MAILING ADDRESS P.O. Box 135				CITY STATE ZIP Orla Tx 79770			
	WELL LOCATION (FROM OPS)	DEGREES LATITUDE 32	MINUTES 01	SECONDS 32.61	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	40	56.71	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE CR1 South to Bottle Axe Rd - 3 miles east								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER 1654		NAME OF LICENSED DRILLER John Sieman			NAME OF WELL DRILLING COMPANY Sieman Drilling & Construction LLC		
	DRILLING STARTED 9/30/13		DRILLING ENDED 9/30/13		DEPTH OF COMPLETED WELL (FT) 280'		BORE HOLE DEPTH (FT) 280'	
					DEPTH WATER FIRST ENCOUNTERED (FT) 180'			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) 60'-0	
	DRILLING FLUID: <input type="checkbox"/> AIR <input checked="" type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	200	10"	PVC	Certa Lok	6"	DR-17	Blank
	200	240	10"	PVC	Certa Lok	6"	DR-17	1032 Screen
240	280	10"	PVC	Certa Lok	6"	DR-17	Blank	
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	20	10	3/8 hole plug Bentonite	6 sacks	gravity		
	40	280	10	3/8 pea gravel	4 yds	gravity		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER C-3595	POD NUMBER 1	TRN NUMBER 517513
------------------------------	------------------------	-----------------------------

EXPL.

Released to Imaging: 10/2/2023 11:35:28 AM

National Water Information System: Web Interface


USGS Water Resources

Data Category:
Groundwater

Geographic Area:
New Mexico

GO

Click to hideNews Bulletins

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

Groundwater levels for New Mexico

Click to hide state-specific text

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 320134103384101

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 320134103384101 26S.32E.21.32311

Lea County, New Mexico
Latitude 32°01'35.2", Longitude 103°41'01.8" NAD83
Land-surface elevation 3,130 feet above NAVD88
The depth of the well is 405 feet below land surface.
The depth of the hole is 405 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Dockum Group (231DCKM) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1993-06-16			D 62610		2723.41	NGVD29	1	L		
1993-06-16			D 62611		2725.00	NAVD88	1	L		
1993-06-16			D 72019	405.00			1	L		
2013-01-16	19:10 UTC		m 62610		2906.47	NGVD29	P	S	USGS	
2013-01-16	19:10 UTC		m 62611		2908.06	NAVD88	P	S	USGS	
2013-01-16	19:10 UTC		m 72019	221.94			P	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet

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

[Questions or Comments](#)[Automated retrievals](#)[Help](#)[Data Tips](#)[Explanation of terms](#)[Subscribe for system changes](#)[News](#)[Accessibility](#)[FOIA](#)[Privacy](#)[Policies and Notices](#)[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)**Title: Groundwater for New Mexico: Water Levels****URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>**Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2023-06-29 12:07:41 EDT

0.32 0.26 nadww02



APPENDIX B

Photographic Log



Photographic Log

ConocoPhillips Company

Wilder 28 Federal 001H

Incident Number NAPP2301736973



Photograph 1

Date: January 9, 2023

Description: Release point with saturated soil

View: East



Photograph 2

Date: March 20, 2023

Description: Stained soil from release

View: West



Photograph 3

Date: April 17, 2023

Description: Hydrovac during excavation

View: West



Photograph 4

Date: April 18, 2023

Description: Completed excavation

View: West



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701
Generated 4/4/2023 9:53:54 AM

JOB DESCRIPTION

Wilder 28 Federal 001H
SDG NUMBER 03D2024173

JOB NUMBER

890-4369-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad**Job Notes**

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

Authorization

Generated
4/4/2023 9:53:54 AM

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

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Laboratory Job ID: 890-4369-1
SDG: 03D2024173

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Definitions/Glossary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Job ID: 890-4369-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-4369-1****Receipt**

The samples were received on 3/20/2023 3:02 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4369-1), SS02 (890-4369-2), SS03 (890-4369-3), SS04 (890-4369-4), SS05 (890-4369-5), SS06 (890-4369-6), SS07 (890-4369-7), SS08 (890-4369-8), SS09 (890-4369-9) and SS10 (890-4369-10).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS02 (890-4369-2), SS05 (890-4369-5), SS07 (890-4369-7), SS08 (890-4369-8) and SS10 (890-4369-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS05 (890-4369-5), SS08 (890-4369-8), SS09 (890-4369-9) and SS10 (890-4369-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-49803 and analytical batch 880-49999 were outside control limits. Non-homogeneity is 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: SS08 (890-4369-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS05 (890-4369-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS08 (890-4369-8), SS09 (890-4369-9) and SS10 (890-4369-10). 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.

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: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS01

Lab Sample ID: 890-4369-1

Date Collected: 03/20/23 10:15

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 13:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 13:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 13:38	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		03/29/23 09:50	04/01/23 13:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 13:38	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		03/29/23 09:50	04/01/23 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	03/29/23 09:50	04/01/23 13:38	1
1,4-Difluorobenzene (Surr)	100		70 - 130	03/29/23 09:50	04/01/23 13:38	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/27/23 10:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 02:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 02:17	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 02:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	03/24/23 14:47	03/27/23 02:17	1
o-Terphenyl	93		70 - 130	03/24/23 14:47	03/27/23 02:17	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.0		4.95	mg/Kg			03/29/23 14:51	1

Client Sample ID: SS02

Lab Sample ID: 890-4369-2

Date Collected: 03/20/23 10:20

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/29/23 09:50	04/01/23 13:59	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/29/23 09:50	04/01/23 13:59	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/29/23 09:50	04/01/23 13:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		03/29/23 09:50	04/01/23 13:59	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/29/23 09:50	04/01/23 13:59	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/29/23 09:50	04/01/23 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	03/29/23 09:50	04/01/23 13:59	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS02

Lab Sample ID: 890-4369-2

Date Collected: 03/20/23 10:20

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130	03/29/23 09:50	04/01/23 13:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg	-		04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	50.5		50.0	mg/Kg	-		03/27/23 10:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg	-	03/24/23 14:47	03/27/23 02:38	1
Diesel Range Organics (Over C10-C28)	50.5		50.0	mg/Kg		03/24/23 14:47	03/27/23 02:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/27/23 02:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			03/24/23 14:47	03/27/23 02:38	1
o-Terphenyl	85		70 - 130			03/24/23 14:47	03/27/23 02:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	126		4.98	mg/Kg	-		03/29/23 14:56	1

Client Sample ID: SS03

Lab Sample ID: 890-4369-3

Date Collected: 03/20/23 10:25

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	-	03/29/23 09:50	04/01/23 14:19	1
Toluene	<0.00200	U	0.00200	mg/Kg	-	03/29/23 09:50	04/01/23 14:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	-	03/29/23 09:50	04/01/23 14:19	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg	-	03/29/23 09:50	04/01/23 14:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	-	03/29/23 09:50	04/01/23 14:19	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg	-	03/29/23 09:50	04/01/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	03/29/23 09:50	04/01/23 14:19	1
1,4-Difluorobenzene (Surr)	86		70 - 130	03/29/23 09:50	04/01/23 14:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg	-		04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg	-		03/27/23 10:30	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS03

Lab Sample ID: 890-4369-3

Date Collected: 03/20/23 10:25

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/27/23 02:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/27/23 02:59	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/27/23 02:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			03/24/23 14:47	03/27/23 02:59	1
o-Terphenyl	87		70 - 130			03/24/23 14:47	03/27/23 02:59	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.8		5.03	mg/Kg			03/29/23 15:09	1

Client Sample ID: SS04

Lab Sample ID: 890-4369-4

Date Collected: 03/20/23 10:30

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		03/29/23 09:50	04/01/23 14:40	1
Toluene	<0.00199	U	0.00199	mg/Kg		03/29/23 09:50	04/01/23 14:40	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		03/29/23 09:50	04/01/23 14:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		03/29/23 09:50	04/01/23 14:40	1
o-Xylene	0.00247		0.00199	mg/Kg		03/29/23 09:50	04/01/23 14:40	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		03/29/23 09:50	04/01/23 14:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			03/29/23 09:50	04/01/23 14:40	1
1,4-Difluorobenzene (Surr)	98		70 - 130			03/29/23 09:50	04/01/23 14:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/27/23 10:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 03:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 03:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 03:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			03/24/23 14:47	03/27/23 03:19	1
o-Terphenyl	95		70 - 130			03/24/23 14:47	03/27/23 03:19	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS04

Lab Sample ID: 890-4369-4

Date Collected: 03/20/23 10:30

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.1		5.04	mg/Kg			03/29/23 15:14	1

Client Sample ID: SS05

Lab Sample ID: 890-4369-5

Date Collected: 03/20/23 10:35

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	mg/Kg		03/29/23 09:50	04/01/23 15:41	20
Toluene	0.983		0.0398	mg/Kg		03/29/23 09:50	04/01/23 15:41	20
Ethylbenzene	10.4		0.199	mg/Kg		04/03/23 08:39	04/03/23 12:24	100
m-Xylene & p-Xylene	33.2		0.398	mg/Kg		04/03/23 08:39	04/03/23 12:24	100
o-Xylene	0.398		0.0398	mg/Kg		03/29/23 09:50	04/01/23 15:41	20
Xylenes, Total	53.3		0.398	mg/Kg		04/03/23 08:39	04/03/23 12:24	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	282	S1+	70 - 130			03/29/23 09:50	04/01/23 15:41	20
1,4-Difluorobenzene (Surr)	93		70 - 130			03/29/23 09:50	04/01/23 15:41	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	45.0		0.398	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	8510		49.9	mg/Kg			03/27/23 10:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	2930		49.9	mg/Kg		03/24/23 14:47	03/27/23 03:40	1
Diesel Range Organics (Over C10-C28)	5580		49.9	mg/Kg		03/24/23 14:47	03/27/23 03:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 03:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	154	S1+	70 - 130			03/24/23 14:47	03/27/23 03:40	1
o-Terphenyl	147	S1+	70 - 130			03/24/23 14:47	03/27/23 03:40	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	875		5.05	mg/Kg			03/29/23 15:19	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS06

Lab Sample ID: 890-4369-6

Date Collected: 03/20/23 10:40

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 15:00	1
Toluene	0.00809		0.00200	mg/Kg		03/29/23 09:50	04/01/23 15:00	1
Ethylbenzene	0.00685		0.00200	mg/Kg		03/29/23 09:50	04/01/23 15:00	1
m-Xylene & p-Xylene	0.0171		0.00399	mg/Kg		03/29/23 09:50	04/01/23 15:00	1
o-Xylene	0.0117		0.00200	mg/Kg		03/29/23 09:50	04/01/23 15:00	1
Xylenes, Total	0.0288		0.00399	mg/Kg		03/29/23 09:50	04/01/23 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	03/29/23 09:50	04/01/23 15:00	1
1,4-Difluorobenzene (Surr)	107		70 - 130	03/29/23 09:50	04/01/23 15:00	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0437		0.00399	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1200		50.0	mg/Kg			03/27/23 10:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	80.0		50.0	mg/Kg		03/24/23 14:47	03/27/23 04:00	1
Diesel Range Organics (Over C10-C28)	1120		50.0	mg/Kg		03/24/23 14:47	03/27/23 04:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/27/23 04:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	03/24/23 14:47	03/27/23 04:00	1
o-Terphenyl	99		70 - 130	03/24/23 14:47	03/27/23 04:00	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3500		24.9	mg/Kg			03/29/23 15:23	5

Client Sample ID: SS07

Lab Sample ID: 890-4369-7

Date Collected: 03/20/23 10:45

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/29/23 09:50	04/01/23 15:21	1
Toluene	0.0194		0.00201	mg/Kg		03/29/23 09:50	04/01/23 15:21	1
Ethylbenzene	0.00586		0.00201	mg/Kg		03/29/23 09:50	04/01/23 15:21	1
m-Xylene & p-Xylene	0.0239		0.00402	mg/Kg		03/29/23 09:50	04/01/23 15:21	1
o-Xylene	0.0149		0.00201	mg/Kg		03/29/23 09:50	04/01/23 15:21	1
Xylenes, Total	0.0388		0.00402	mg/Kg		03/29/23 09:50	04/01/23 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	149	S1+	70 - 130	03/29/23 09:50	04/01/23 15:21	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS07

Lab Sample ID: 890-4369-7

Date Collected: 03/20/23 10:45

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102		70 - 130	03/29/23 09:50	04/01/23 15:21	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0641		0.00402	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2010		49.9	mg/Kg			03/27/23 10:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	85.7		49.9	mg/Kg		03/24/23 14:47	03/27/23 04:21	1
Diesel Range Organics (Over C10-C28)	1920		49.9	mg/Kg		03/24/23 14:47	03/27/23 04:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 04:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			03/24/23 14:47	03/27/23 04:21	1
o-Terphenyl	96		70 - 130			03/24/23 14:47	03/27/23 04:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	470		4.96	mg/Kg			03/29/23 15:28	1

Client Sample ID: SS08

Lab Sample ID: 890-4369-8

Date Collected: 03/20/23 10:50

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.630		0.0401	mg/Kg		03/29/23 09:50	04/01/23 16:02	20
Toluene	2.69		0.0401	mg/Kg		03/29/23 09:50	04/01/23 16:02	20
Ethylbenzene	19.9		0.200	mg/Kg		04/03/23 08:39	04/03/23 12:44	100
m-Xylene & p-Xylene	77.1		2.00	mg/Kg		04/03/23 08:39	04/03/23 18:55	500
o-Xylene	0.674		0.0401	mg/Kg		03/29/23 09:50	04/01/23 16:02	20
Xylenes, Total	104		2.00	mg/Kg		04/03/23 08:39	04/03/23 18:55	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	395	S1+	70 - 130	03/29/23 09:50	04/01/23 16:02	20
1,4-Difluorobenzene (Surr)	75		70 - 130	03/29/23 09:50	04/01/23 16:02	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	101		2.00	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	9320		49.9	mg/Kg			03/27/23 10:30	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS08
Date Collected: 03/20/23 10:50
Date Received: 03/20/23 15:02
Sample Depth: 0.5'

Lab Sample ID: 890-4369-8
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	3900		49.9	mg/Kg		03/24/23 14:47	03/27/23 04:42	1	
Diesel Range Organics (Over C10-C28)	5420		49.9	mg/Kg		03/24/23 14:47	03/27/23 04:42	1	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 04:42	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	154	S1+	70 - 130			03/24/23 14:47	03/27/23 04:42	1	
o-Terphenyl	141	S1+	70 - 130			03/24/23 14:47	03/27/23 04:42	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	340		25.0	mg/Kg			03/29/23 15:32	5	

Client Sample ID: SS09
Date Collected: 03/20/23 10:55
Date Received: 03/20/23 15:02
Sample Depth: 0.5'

Lab Sample ID: 890-4369-9
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.0398	U	0.0398	mg/Kg		03/29/23 09:50	04/01/23 16:22	20	
Toluene	0.261		0.0398	mg/Kg		03/29/23 09:50	04/01/23 16:22	20	
Ethylbenzene	5.16		0.0398	mg/Kg		03/29/23 09:50	04/01/23 16:22	20	
m-Xylene & p-Xylene	10.0		0.0797	mg/Kg		03/29/23 09:50	04/01/23 16:22	20	
o-Xylene	7.26		0.201	mg/Kg		04/03/23 08:39	04/03/23 13:05	100	
Xylenes, Total	18.1		0.402	mg/Kg		04/03/23 08:39	04/03/23 13:05	100	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	373	S1+	70 - 130			03/29/23 09:50	04/01/23 16:22	20	
1,4-Difluorobenzene (Surr)	84		70 - 130			03/29/23 09:50	04/01/23 16:22	20	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	22.7		0.0797	mg/Kg			04/03/23 15:53	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	4600		50.0	mg/Kg			03/27/23 10:30	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	1540		50.0	mg/Kg		03/24/23 14:47	03/27/23 05:02	1	
Diesel Range Organics (Over C10-C28)	3060		50.0	mg/Kg		03/24/23 14:47	03/27/23 05:02	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/27/23 05:02	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	131	S1+	70 - 130			03/24/23 14:47	03/27/23 05:02	1	
o-Terphenyl	95		70 - 130			03/24/23 14:47	03/27/23 05:02	1	

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS09

Lab Sample ID: 890-4369-9

Date Collected: 03/20/23 10:55

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2200		25.1	mg/Kg			03/29/23 15:37	5

Client Sample ID: SS10

Lab Sample ID: 890-4369-10

Date Collected: 03/20/23 11:00

Matrix: Solid

Date Received: 03/20/23 15:02

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.132		0.0396	mg/Kg		03/29/23 09:50	04/01/23 16:43	20
Toluene	1.28		0.0396	mg/Kg		03/29/23 09:50	04/01/23 16:43	20
Ethylbenzene	18.3		0.202	mg/Kg		04/03/23 08:39	04/03/23 13:25	100
m-Xylene & p-Xylene	0.161		0.0792	mg/Kg		03/29/23 09:50	04/01/23 16:43	20
o-Xylene	0.253		0.0396	mg/Kg		03/29/23 09:50	04/01/23 16:43	20
Xylenes, Total	0.414		0.0792	mg/Kg		03/29/23 09:50	04/01/23 16:43	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	218	S1+	70 - 130			03/29/23 09:50	04/01/23 16:43	20
1,4-Difluorobenzene (Surr)	109		70 - 130			03/29/23 09:50	04/01/23 16:43	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	20.1		0.202	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	7000		49.9	mg/Kg			03/27/23 10:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	3380		49.9	mg/Kg		03/24/23 14:47	03/27/23 05:23	1
Diesel Range Organics (Over C10-C28)	3620		49.9	mg/Kg		03/24/23 14:47	03/27/23 05:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/24/23 14:47	03/27/23 05:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	146	S1+	70 - 130			03/24/23 14:47	03/27/23 05:23	1
o-Terphenyl	100		70 - 130			03/24/23 14:47	03/27/23 05:23	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.5		5.02	mg/Kg			04/01/23 00:40	1

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Surrogate Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

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)
880-26292-A-47-B MS	Matrix Spike	85	114
880-26292-A-47-C MSD	Matrix Spike Duplicate	98	117
890-4369-1	SS01	97	100
890-4369-2	SS02	95	66 S1-
890-4369-3	SS03	107	86
890-4369-4	SS04	95	98
890-4369-5	SS05	282 S1+	93
890-4369-6	SS06	128	107
890-4369-7	SS07	149 S1+	102
890-4369-8	SS08	395 S1+	75
890-4369-9	SS09	373 S1+	84
890-4369-10	SS10	218 S1+	109
890-4388-A-21-F MS	Matrix Spike	122	108
890-4388-A-21-G MSD	Matrix Spike Duplicate	116	109
LCS 880-49803/1-A	Lab Control Sample	115	109
LCS 880-50130/1-A	Lab Control Sample	99	111
LCSD 880-49803/2-A	Lab Control Sample Dup	124	114
LCSD 880-50130/2-A	Lab Control Sample Dup	89	117
MB 880-49657/5-A	Method Blank	85	89
MB 880-49803/5-A	Method Blank	73	85
MB 880-50130/5-A	Method Blank	77	97
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-26282-A-81-B MS	Matrix Spike	112	93
880-26282-A-81-C MSD	Matrix Spike Duplicate	117	98
890-4369-1	SS01	99	93
890-4369-2	SS02	93	85
890-4369-3	SS03	96	87
890-4369-4	SS04	101	95
890-4369-5	SS05	154 S1+	147 S1+
890-4369-6	SS06	111	99
890-4369-7	SS07	105	96
890-4369-8	SS08	154 S1+	141 S1+
890-4369-9	SS09	131 S1+	95
890-4369-10	SS10	146 S1+	100
LCS 880-49453/2-A	Lab Control Sample	95	85
LCSD 880-49453/3-A	Lab Control Sample Dup	91	83
MB 880-49453/1-A	Method Blank	118	115
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-49657/5-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49657

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/27/23 16:06	03/31/23 21:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130	03/27/23 16:06	03/31/23 21:58	1
1,4-Difluorobenzene (Surr)	89		70 - 130	03/27/23 16:06	03/31/23 21:58	1

Lab Sample ID: MB 880-49803/5-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49803

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 08:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 08:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 08:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/29/23 09:50	04/01/23 08:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/29/23 09:50	04/01/23 08:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/29/23 09:50	04/01/23 08:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130	03/29/23 09:50	04/01/23 08:32	1
1,4-Difluorobenzene (Surr)	85		70 - 130	03/29/23 09:50	04/01/23 08:32	1

Lab Sample ID: LCS 880-49803/1-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49803

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09795		mg/Kg		98	70 - 130
Toluene	0.100	0.08989		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.09384		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.1991		mg/Kg		100	70 - 130
o-Xylene	0.100	0.1036		mg/Kg		104	70 - 130

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

Lab Sample ID: LCSD 880-49803/2-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 49803

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1008		mg/Kg		101	70 - 130	3	35

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

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

Lab Sample ID: LCSD 880-49803/2-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 49803

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.09274		mg/Kg		93	70 - 130	3	35
Ethylbenzene	0.100	0.1014		mg/Kg		101	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2134		mg/Kg		107	70 - 130	7	35
o-Xylene	0.100	0.1112		mg/Kg		111	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	124		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

Lab Sample ID: 890-4388-A-21-F MS

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 49803

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0998	0.09156		mg/Kg		92	70 - 130
Toluene	<0.00198	U F1	0.0998	0.08803		mg/Kg		88	70 - 130
Ethylbenzene	<0.00198	U	0.0998	0.09372		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1948		mg/Kg		98	70 - 130
o-Xylene	<0.00198	U	0.0998	0.09966		mg/Kg		100	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 890-4388-A-21-G MSD

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 49803

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.07017		mg/Kg		70	70 - 130	26	35
Toluene	<0.00198	U F1	0.100	0.06706	F1	mg/Kg		67	70 - 130	27	35
Ethylbenzene	<0.00198	U	0.100	0.07394		mg/Kg		74	70 - 130	24	35
m-Xylene & p-Xylene	<0.00396	U	0.201	0.1510		mg/Kg		75	70 - 130	25	35
o-Xylene	<0.00198	U	0.100	0.07875		mg/Kg		78	70 - 130	23	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	116		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: MB 880-50130/5-A

Matrix: Solid

Analysis Batch: 50119

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 50130

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/03/23 08:39	04/03/23 11:01	1

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

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

Lab Sample ID: MB 880-50130/5-A

Matrix: Solid

Analysis Batch: 50119

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 50130

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		70 - 130			04/03/23 08:39	04/03/23 11:01	1
1,4-Difluorobenzene (Surr)	97		70 - 130			04/03/23 08:39	04/03/23 11:01	1

Lab Sample ID: LCS 880-50130/1-A

Matrix: Solid

Analysis Batch: 50119

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 50130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1190		mg/Kg		119	70 - 130
Toluene	0.100	0.1022		mg/Kg		102	70 - 130
Ethylbenzene	0.100	0.09825		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.2029		mg/Kg		101	70 - 130
o-Xylene	0.100	0.1017		mg/Kg		102	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	99		70 - 130				
1,4-Difluorobenzene (Surr)	111		70 - 130				

Lab Sample ID: LCSD 880-50130/2-A

Matrix: Solid

Analysis Batch: 50119

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 50130

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1186		mg/Kg		119	70 - 130	0	35
Toluene	0.100	0.09718		mg/Kg		97	70 - 130	5	35
Ethylbenzene	0.100	0.08856		mg/Kg		89	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.1774		mg/Kg		89	70 - 130	13	35
o-Xylene	0.100	0.08922		mg/Kg		89	70 - 130	13	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	89		70 - 130						
1,4-Difluorobenzene (Surr)	117		70 - 130						

Lab Sample ID: 880-26292-A-47-B MS

Matrix: Solid

Analysis Batch: 50119

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 50130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F2 F1	0.100	0.1024		mg/Kg		102	70 - 130
Toluene	<0.00200	U F2 F1	0.100	0.08445		mg/Kg		84	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.100	0.07581		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.201	0.1491		mg/Kg		74	70 - 130
o-Xylene	<0.00200	U F2 F1	0.100	0.07405		mg/Kg		74	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

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

Lab Sample ID: 880-26292-A-47-B MS

Matrix: Solid

Analysis Batch: 50119

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 50130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

Lab Sample ID: 880-26292-A-47-C MSD

Matrix: Solid

Analysis Batch: 50119

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 50130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1	0.0990	0.1051		mg/Kg		106	70 - 130	3	35
Toluene	<0.00200	U F2 F1	0.0990	0.08707		mg/Kg		88	70 - 130	3	35
Ethylbenzene	<0.00200	U F2 F1	0.0990	0.07985		mg/Kg		81	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.198	0.1599		mg/Kg		81	70 - 130	7	35
o-Xylene	<0.00200	U F2 F1	0.0990	0.08075		mg/Kg		82	70 - 130	9	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	117		70 - 130

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

Lab Sample ID: MB 880-49453/1-A

Matrix: Solid

Analysis Batch: 49513

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49453

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/26/23 20:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/26/23 20:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/24/23 14:47	03/26/23 20:41	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	118		70 - 130	03/24/23 14:47	03/26/23 20:41	1		
o-Terphenyl	115		70 - 130	03/24/23 14:47	03/26/23 20:41	1		

Lab Sample ID: LCS 880-49453/2-A

Matrix: Solid

Analysis Batch: 49513

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	904.9		mg/Kg		90	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	919.9		mg/Kg		92	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	85		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

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

Lab Sample ID: LCSD 880-49453/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 49513				Prep Batch: 49453							
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	876.6		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	889.5		mg/Kg		89	70 - 130	3	20
LCSD LCSD											
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	91		70 - 130								
o-Terphenyl	83		70 - 130								

Lab Sample ID: 880-26282-A-81-B MS				Client Sample ID: Matrix Spike							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 49513				Prep Batch: 49453							
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1024		mg/Kg		103	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	731.2		mg/Kg		71	70 - 130		
MS MS											
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	112		70 - 130								
o-Terphenyl	93		70 - 130								

Lab Sample ID: 880-26282-A-81-C MSD				Client Sample ID: Matrix Spike Duplicate							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 49513				Prep Batch: 49453							
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	1069		mg/Kg		107	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	770.0		mg/Kg		74	70 - 130	5	20
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	117		70 - 130								
o-Terphenyl	98		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-49798/1-A				Client Sample ID: Method Blank							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 49899											
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Chloride	<5.00	U	5.00	mg/Kg			03/29/23 13:20	1			

QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-49798/2-A

Matrix: Solid

Analysis Batch: 49899

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	235.8		mg/Kg		94	90 - 110

Lab Sample ID: LCSD 880-49798/3-A

Matrix: Solid

Analysis Batch: 49899

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	237.6		mg/Kg		95	90 - 110	1	20

Lab Sample ID: 890-4368-A-2-D MS

Matrix: Solid

Analysis Batch: 49899

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	386		248	614.9		mg/Kg		93	90 - 110

Lab Sample ID: 890-4368-A-2-E MSD

Matrix: Solid

Analysis Batch: 49899

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	386		248	617.8		mg/Kg		94	90 - 110	0	20

Lab Sample ID: MB 880-49881/1-A

Matrix: Solid

Analysis Batch: 50038

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			03/31/23 22:20	1

Lab Sample ID: LCS 880-49881/2-A

Matrix: Solid

Analysis Batch: 50038

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	263.2		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-49881/3-A

Matrix: Solid

Analysis Batch: 50038

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	263.2		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 890-4352-A-11-D MS

Matrix: Solid

Analysis Batch: 50038

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	33.6		252	285.7		mg/Kg		100	90 - 110

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-4352-A-11-E MSD					Client Sample ID: Matrix Spike Duplicate							
Matrix: Solid					Prep Type: Soluble							
Analysis Batch: 50038												
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride	33.6		252	285.7		mg/Kg		100	90 - 110	0	20	

QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

GC VOA

Prep Batch: 49657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-49657/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 49803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Total/NA	Solid	5035	
890-4369-2	SS02	Total/NA	Solid	5035	
890-4369-3	SS03	Total/NA	Solid	5035	
890-4369-4	SS04	Total/NA	Solid	5035	
890-4369-5	SS05	Total/NA	Solid	5035	
890-4369-6	SS06	Total/NA	Solid	5035	
890-4369-7	SS07	Total/NA	Solid	5035	
890-4369-8	SS08	Total/NA	Solid	5035	
890-4369-9	SS09	Total/NA	Solid	5035	
890-4369-10	SS10	Total/NA	Solid	5035	
MB 880-49803/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-49803/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-49803/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4388-A-21-F MS	Matrix Spike	Total/NA	Solid	5035	
890-4388-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 49999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Total/NA	Solid	8021B	49803
890-4369-2	SS02	Total/NA	Solid	8021B	49803
890-4369-3	SS03	Total/NA	Solid	8021B	49803
890-4369-4	SS04	Total/NA	Solid	8021B	49803
890-4369-5	SS05	Total/NA	Solid	8021B	49803
890-4369-6	SS06	Total/NA	Solid	8021B	49803
890-4369-7	SS07	Total/NA	Solid	8021B	49803
890-4369-8	SS08	Total/NA	Solid	8021B	49803
890-4369-9	SS09	Total/NA	Solid	8021B	49803
890-4369-10	SS10	Total/NA	Solid	8021B	49803
MB 880-49657/5-A	Method Blank	Total/NA	Solid	8021B	49657
MB 880-49803/5-A	Method Blank	Total/NA	Solid	8021B	49803
LCS 880-49803/1-A	Lab Control Sample	Total/NA	Solid	8021B	49803
LCSD 880-49803/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	49803
890-4388-A-21-F MS	Matrix Spike	Total/NA	Solid	8021B	49803
890-4388-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	49803

Analysis Batch: 50119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-5	SS05	Total/NA	Solid	8021B	50130
890-4369-8	SS08	Total/NA	Solid	8021B	50130
890-4369-8	SS08	Total/NA	Solid	8021B	50130
890-4369-9	SS09	Total/NA	Solid	8021B	50130
890-4369-10	SS10	Total/NA	Solid	8021B	50130
MB 880-50130/5-A	Method Blank	Total/NA	Solid	8021B	50130
LCS 880-50130/1-A	Lab Control Sample	Total/NA	Solid	8021B	50130
LCSD 880-50130/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	50130
880-26292-A-47-B MS	Matrix Spike	Total/NA	Solid	8021B	50130
880-26292-A-47-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	50130

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

GC VOA

Prep Batch: 50130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-5	SS05	Total/NA	Solid	5035	
890-4369-8	SS08	Total/NA	Solid	5035	
890-4369-9	SS09	Total/NA	Solid	5035	
890-4369-10	SS10	Total/NA	Solid	5035	
MB 880-50130/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-50130/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-50130/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-26292-A-47-B MS	Matrix Spike	Total/NA	Solid	5035	
880-26292-A-47-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 50245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Total/NA	Solid	Total BTEX	
890-4369-2	SS02	Total/NA	Solid	Total BTEX	
890-4369-3	SS03	Total/NA	Solid	Total BTEX	
890-4369-4	SS04	Total/NA	Solid	Total BTEX	
890-4369-5	SS05	Total/NA	Solid	Total BTEX	
890-4369-6	SS06	Total/NA	Solid	Total BTEX	
890-4369-7	SS07	Total/NA	Solid	Total BTEX	
890-4369-8	SS08	Total/NA	Solid	Total BTEX	
890-4369-9	SS09	Total/NA	Solid	Total BTEX	
890-4369-10	SS10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 49453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Total/NA	Solid	8015NM Prep	
890-4369-2	SS02	Total/NA	Solid	8015NM Prep	
890-4369-3	SS03	Total/NA	Solid	8015NM Prep	
890-4369-4	SS04	Total/NA	Solid	8015NM Prep	
890-4369-5	SS05	Total/NA	Solid	8015NM Prep	
890-4369-6	SS06	Total/NA	Solid	8015NM Prep	
890-4369-7	SS07	Total/NA	Solid	8015NM Prep	
890-4369-8	SS08	Total/NA	Solid	8015NM Prep	
890-4369-9	SS09	Total/NA	Solid	8015NM Prep	
890-4369-10	SS10	Total/NA	Solid	8015NM Prep	
MB 880-49453/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-49453/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-49453/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-26282-A-81-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-26282-A-81-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 49513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Total/NA	Solid	8015B NM	49453
890-4369-2	SS02	Total/NA	Solid	8015B NM	49453
890-4369-3	SS03	Total/NA	Solid	8015B NM	49453
890-4369-4	SS04	Total/NA	Solid	8015B NM	49453
890-4369-5	SS05	Total/NA	Solid	8015B NM	49453
890-4369-6	SS06	Total/NA	Solid	8015B NM	49453

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

GC Semi VOA (Continued)

Analysis Batch: 49513 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-7	SS07	Total/NA	Solid	8015B NM	49453
890-4369-8	SS08	Total/NA	Solid	8015B NM	49453
890-4369-9	SS09	Total/NA	Solid	8015B NM	49453
890-4369-10	SS10	Total/NA	Solid	8015B NM	49453
MB 880-49453/1-A	Method Blank	Total/NA	Solid	8015B NM	49453
LCS 880-49453/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	49453
LCSD 880-49453/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	49453
880-26282-A-81-B MS	Matrix Spike	Total/NA	Solid	8015B NM	49453
880-26282-A-81-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	49453

Analysis Batch: 49596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Total/NA	Solid	8015 NM	
890-4369-2	SS02	Total/NA	Solid	8015 NM	
890-4369-3	SS03	Total/NA	Solid	8015 NM	
890-4369-4	SS04	Total/NA	Solid	8015 NM	
890-4369-5	SS05	Total/NA	Solid	8015 NM	
890-4369-6	SS06	Total/NA	Solid	8015 NM	
890-4369-7	SS07	Total/NA	Solid	8015 NM	
890-4369-8	SS08	Total/NA	Solid	8015 NM	
890-4369-9	SS09	Total/NA	Solid	8015 NM	
890-4369-10	SS10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 49798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Soluble	Solid	DI Leach	
890-4369-2	SS02	Soluble	Solid	DI Leach	
890-4369-3	SS03	Soluble	Solid	DI Leach	
890-4369-4	SS04	Soluble	Solid	DI Leach	
890-4369-5	SS05	Soluble	Solid	DI Leach	
890-4369-6	SS06	Soluble	Solid	DI Leach	
890-4369-7	SS07	Soluble	Solid	DI Leach	
890-4369-8	SS08	Soluble	Solid	DI Leach	
890-4369-9	SS09	Soluble	Solid	DI Leach	
MB 880-49798/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-49798/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-49798/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4368-A-2-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4368-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 49881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-10	SS10	Soluble	Solid	DI Leach	
MB 880-49881/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-49881/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-49881/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4352-A-11-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4352-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

HPLC/IC

Analysis Batch: 49899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-1	SS01	Soluble	Solid	300.0	49798
890-4369-2	SS02	Soluble	Solid	300.0	49798
890-4369-3	SS03	Soluble	Solid	300.0	49798
890-4369-4	SS04	Soluble	Solid	300.0	49798
890-4369-5	SS05	Soluble	Solid	300.0	49798
890-4369-6	SS06	Soluble	Solid	300.0	49798
890-4369-7	SS07	Soluble	Solid	300.0	49798
890-4369-8	SS08	Soluble	Solid	300.0	49798
890-4369-9	SS09	Soluble	Solid	300.0	49798
MB 880-49798/1-A	Method Blank	Soluble	Solid	300.0	49798
LCS 880-49798/2-A	Lab Control Sample	Soluble	Solid	300.0	49798
LCSD 880-49798/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	49798
890-4368-A-2-D MS	Matrix Spike	Soluble	Solid	300.0	49798
890-4368-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	49798

Analysis Batch: 50038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4369-10	SS10	Soluble	Solid	300.0	49881
MB 880-49881/1-A	Method Blank	Soluble	Solid	300.0	49881
LCS 880-49881/2-A	Lab Control Sample	Soluble	Solid	300.0	49881
LCSD 880-49881/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	49881
890-4352-A-11-D MS	Matrix Spike	Soluble	Solid	300.0	49881
890-4352-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	49881

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS01
Date Collected: 03/20/23 10:15
Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-1
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	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49999	04/01/23 13:38	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 02:17	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49899	03/29/23 14:51	SMC	EET MID

Client Sample ID: SS02
Date Collected: 03/20/23 10:20
Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49999	04/01/23 13:59	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 02:38	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49899	03/29/23 14:56	SMC	EET MID

Client Sample ID: SS03
Date Collected: 03/20/23 10:25
Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49999	04/01/23 14:19	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 02:59	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49899	03/29/23 15:09	SMC	EET MID

Client Sample ID: SS04
Date Collected: 03/20/23 10:30
Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49999	04/01/23 14:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS04

Date Collected: 03/20/23 10:30

Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-4

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			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 03:19	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49899	03/29/23 15:14	SMC	EET MID

Client Sample ID: SS05

Date Collected: 03/20/23 10:35

Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 15:41	SM	EET MID
Total/NA	Prep	5035			5.03 g	5 mL	50130	04/03/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	50119	04/03/23 12:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 03:40	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49899	03/29/23 15:19	SMC	EET MID

Client Sample ID: SS06

Date Collected: 03/20/23 10:40

Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49999	04/01/23 15:00	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 04:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49899	03/29/23 15:23	SMC	EET MID

Client Sample ID: SS07

Date Collected: 03/20/23 10:45

Date Received: 03/20/23 15:02

Lab Sample ID: 890-4369-7

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	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49999	04/01/23 15:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS07

Lab Sample ID: 890-4369-7

Date Collected: 03/20/23 10:45

Matrix: Solid

Date Received: 03/20/23 15:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 04:21	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	49899	03/29/23 15:28	SMC	EET MID

Client Sample ID: SS08

Lab Sample ID: 890-4369-8

Date Collected: 03/20/23 10:50

Matrix: Solid

Date Received: 03/20/23 15:02

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	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 16:02	SM	EET MID
Total/NA	Prep	5035			5.01 g	5 mL	50130	04/03/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	50119	04/03/23 12:44	MNR	EET MID
Total/NA	Prep	5035			5.01 g	5 mL	50130	04/03/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		500	5 mL	5 mL	50119	04/03/23 18:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 04:42	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49899	03/29/23 15:32	SMC	EET MID

Client Sample ID: SS09

Lab Sample ID: 890-4369-9

Date Collected: 03/20/23 10:55

Matrix: Solid

Date Received: 03/20/23 15:02

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	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 16:22	SM	EET MID
Total/NA	Prep	5035			4.97 g	5 mL	50130	04/03/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	50119	04/03/23 13:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 05:02	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	49798	03/29/23 09:38	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	49899	03/29/23 15:37	SMC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Client Sample ID: SS10

Lab Sample ID: 890-4369-10

Date Collected: 03/20/23 11:00

Matrix: Solid

Date Received: 03/20/23 15:02

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	49803	03/29/23 09:50	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 16:43	SM	EET MID
Total/NA	Prep	5035			4.95 g	5 mL	50130	04/03/23 08:39	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	50119	04/03/23 13:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			50245	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49596	03/27/23 10:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49453	03/24/23 14:47	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49513	03/27/23 05:23	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	49881	03/29/23 16:18	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50038	04/01/23 00:40	SMC	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Laboratory: Eurofins Midland

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

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

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4369-1
SDG: 03D2024173

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4369-1	SS01	Solid	03/20/23 10:15	03/20/23 15:02	0.5'
890-4369-2	SS02	Solid	03/20/23 10:20	03/20/23 15:02	0.5'
890-4369-3	SS03	Solid	03/20/23 10:25	03/20/23 15:02	0.5'
890-4369-4	SS04	Solid	03/20/23 10:30	03/20/23 15:02	0.5'
890-4369-5	SS05	Solid	03/20/23 10:35	03/20/23 15:02	0.5'
890-4369-6	SS06	Solid	03/20/23 10:40	03/20/23 15:02	0.5'
890-4369-7	SS07	Solid	03/20/23 10:45	03/20/23 15:02	0.5'
890-4369-8	SS08	Solid	03/20/23 10:50	03/20/23 15:02	0.5'
890-4369-9	SS09	Solid	03/20/23 10:55	03/20/23 15:02	0.5'
890-4369-10	SS10	Solid	03/20/23 11:00	03/20/23 15:02	0.5'



Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments	
Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: _____

Project Name:		Wilder 28 Federal 001H		Turn Around		ANALYSIS REQUEST												Preservative Codes				
Project Number:		03D2024173		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush														None: NO DI Water: H ₂ O				
Project Location:		32.0194, -103.6730		Due Date:														Cool: Cool MeOH: Me				
Sampler's Name:		Peter Van Patten		TAT starts the day received by the lab, if received by 4:30pm														HCL: HC HNO ₃ : HN				
PO #:																		H ₂ SO ₄ : H ₂ NaOH: Na				
SAMPLE RECEIPT		Temp Blank: Yes No		Wet Ice: Yes No														H ₃ PO ₄ : HP				
Samples Received Intact: Yes No		Thermometer ID: T111009																NaHSO ₄ : NABIS				
Cooler Custody Seals: Yes No N/A		Correction Factor: -0.2																Na ₂ S ₂ O ₃ : NaSO ₃				
Sample Custody Seals: Yes No N/A		Temperature Reading: 3.4																Zn Acetate+NaOH: Zn				
Total Containers:		Corrected Temperature: 3.2																NaOH+Ascorbic Acid: SAPC				
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)											Sample Comments	
SS01		Soil	3/20/2023	1015	0.5'	Comp	1	x	x	x												
SS02		Soil	3/20/2023	1020	0.5'	Comp	1	x	x	x												
SS03		Soil	3/20/2023	1025	0.5'	Comp	1	x	x	x												
SS04		Soil	3/20/2023	1030	0.5'	Comp	1	x	x	x												
SS05		Soil	3/20/2023	1035	0.5'	Comp	1	x	x	x												
SS06		Soil	3/20/2023	1040	0.5'	Comp	1	x	x	x												
SS07		Soil	3/20/2023	1045	0.5'	Comp	1	x	x	x												
SS08		Soil	3/20/2023	1050	0.5'	Comp	1	x	x	x												
SS09		Soil	3/20/2023	1055	0.5'	Comp	1	x	x	x												
SS10		Soil	3/20/2023	1100	0.5'	Comp	1	x	x	x												

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti 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 Ti 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 <i>[Signature]</i>	<i>[Signature]</i>	3.20.23 / 502			
3					
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4369-1

SDG Number: 03D2024173

Login Number: 4369

List Number: 1

Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4369-1

SDG Number: 03D2024173

Login Number: 4369

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 03/22/23 11:06 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	



Environment Testing

- 1
- 2
- 3
- 4
- 5
- 6
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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum

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Midland, Texas 79701

Generated 4/26/2023 4:45:00 PM

JOB DESCRIPTION

Wilder 28 Federal 001H
SDG NUMBER 03D2024173

JOB NUMBER

890-4531-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

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

Authorization



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Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Laboratory Job ID: 890-4531-1
SDG: 03D2024173

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Definitions/Glossary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Job ID: 890-4531-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4531-1

Receipt

The samples were received on 4/17/2023 4:16 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4531-1), FS02 (890-4531-2), FS03 (890-4531-3), FS04 (890-4531-4), FS05 (890-4531-5), SW01 (890-4531-6), SW02 (890-4531-7), SW03 (890-4531-8) and SW04 (890-4531-9).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-51488 and analytical batch 880-51464 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS02 (890-4531-2), FS03 (890-4531-3), FS04 (890-4531-4) and SW01 (890-4531-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-51573 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-27315-A-1-A MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-51473 and analytical batch 880-51573 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-51528 and analytical batch 880-51456 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-4531-1), FS02 (890-4531-2), FS03 (890-4531-3), FS04 (890-4531-4), FS05 (890-4531-5), SW01 (890-4531-6), SW02 (890-4531-7), SW03 (890-4531-8), SW04 (890-4531-9), (890-4531-A-1-C MS) and (890-4531-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-51528 and analytical batch 880-51456 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-51747 and analytical batch 880-51980 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. The

Case Narrative

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Job ID: 890-4531-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

associated samples are: FS01 (890-4531-1), FS02 (890-4531-2), FS03 (890-4531-3), FS04 (890-4531-4), FS05 (890-4531-5), SW01 (890-4531-6), SW02 (890-4531-7), SW03 (890-4531-8), SW04 (890-4531-9), (890-4531-A-1-F MS) and (890-4531-A-1-G MSD).

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

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: FS01

Lab Sample ID: 890-4531-1

Date Collected: 04/17/23 09:30

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 20:40	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 20:40	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 20:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/19/23 17:00	04/20/23 20:40	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 20:40	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/19/23 17:00	04/20/23 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	04/19/23 17:00	04/20/23 20:40	1
1,4-Difluorobenzene (Surr)	72		70 - 130	04/19/23 17:00	04/20/23 20:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 13:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/20/23 09:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 21:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9	mg/Kg		04/19/23 14:56	04/19/23 21:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 21:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	147	S1+	70 - 130	04/19/23 14:56	04/19/23 21:12	1
o-Terphenyl	139	S1+	70 - 130	04/19/23 14:56	04/19/23 21:12	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66.6	F1	4.97	mg/Kg			04/25/23 17:10	1

Client Sample ID: FS02

Lab Sample ID: 890-4531-2

Date Collected: 04/17/23 10:00

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 21:06	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 21:06	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 21:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/19/23 17:00	04/20/23 21:06	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/19/23 17:00	04/20/23 21:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/19/23 17:00	04/20/23 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	04/19/23 17:00	04/20/23 21:06	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: FS02

Lab Sample ID: 890-4531-2

Date Collected: 04/17/23 10:00

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 1.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84		70 - 130	04/19/23 17:00	04/20/23 21:06	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 13:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/20/23 09:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 22:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 22:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 22:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	147	S1+	70 - 130			04/19/23 14:56	04/19/23 22:16	1
o-Terphenyl	139	S1+	70 - 130			04/19/23 14:56	04/19/23 22:16	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	101		4.99	mg/Kg			04/25/23 17:24	1

Client Sample ID: FS03

Lab Sample ID: 890-4531-3

Date Collected: 04/17/23 10:15

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 21:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 21:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 21:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/19/23 17:00	04/20/23 21:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 21:32	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/19/23 17:00	04/20/23 21:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130	04/19/23 17:00	04/20/23 21:32	1
1,4-Difluorobenzene (Surr)	78		70 - 130	04/19/23 17:00	04/20/23 21:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			04/21/23 13:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			04/20/23 09:13	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: FS03

Lab Sample ID: 890-4531-3

Date Collected: 04/17/23 10:15

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		04/19/23 14:56	04/19/23 22:38	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/19/23 14:56	04/19/23 22:38	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/19/23 14:56	04/19/23 22:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	145	S1+	70 - 130			04/19/23 14:56	04/19/23 22:38	1
o-Terphenyl	139	S1+	70 - 130			04/19/23 14:56	04/19/23 22:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.3		4.96	mg/Kg			04/25/23 17:29	1

Client Sample ID: FS04

Lab Sample ID: 890-4531-4

Date Collected: 04/17/23 10:30

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 2.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/19/23 17:00	04/20/23 21:58	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/19/23 17:00	04/20/23 21:58	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/19/23 17:00	04/20/23 21:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/19/23 17:00	04/20/23 21:58	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/19/23 17:00	04/20/23 21:58	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/19/23 17:00	04/20/23 21:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130			04/19/23 17:00	04/20/23 21:58	1
1,4-Difluorobenzene (Surr)	83		70 - 130			04/19/23 17:00	04/20/23 21:58	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/21/23 13:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			04/20/23 09:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		04/19/23 14:56	04/19/23 22:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/19/23 14:56	04/19/23 22:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/19/23 14:56	04/19/23 22:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	147	S1+	70 - 130			04/19/23 14:56	04/19/23 22:59	1
o-Terphenyl	134	S1+	70 - 130			04/19/23 14:56	04/19/23 22:59	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: FS04

Lab Sample ID: 890-4531-4

Date Collected: 04/17/23 10:30

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 2.0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.0		5.02	mg/Kg			04/25/23 17:34	1

Client Sample ID: FS05

Lab Sample ID: 890-4531-5

Date Collected: 04/17/23 10:45

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 2.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 22:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 22:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 22:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/19/23 17:00	04/20/23 22:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/23 17:00	04/20/23 22:25	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/19/23 17:00	04/20/23 22:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			04/19/23 17:00	04/20/23 22:25	1
1,4-Difluorobenzene (Surr)	80		70 - 130			04/19/23 17:00	04/20/23 22:25	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			04/21/23 13:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/20/23 09:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 23:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 23:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/19/23 23:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	144	S1+	70 - 130			04/19/23 14:56	04/19/23 23:21	1
o-Terphenyl	138	S1+	70 - 130			04/19/23 14:56	04/19/23 23:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	56.5		5.00	mg/Kg			04/25/23 17:39	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: SW01

Lab Sample ID: 890-4531-6

Date Collected: 04/17/23 11:05

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 0-2.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/19/23 17:00	04/20/23 22:51	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/19/23 17:00	04/20/23 22:51	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/19/23 17:00	04/20/23 22:51	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/19/23 17:00	04/20/23 22:51	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/19/23 17:00	04/20/23 22:51	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/19/23 17:00	04/20/23 22:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130	04/19/23 17:00	04/20/23 22:51	1
1,4-Difluorobenzene (Surr)	80		70 - 130	04/19/23 17:00	04/20/23 22:51	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			04/21/23 13:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/20/23 09:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/19/23 23:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/19/23 23:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/19/23 23:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	145	S1+	70 - 130	04/19/23 14:56	04/19/23 23:42	1
o-Terphenyl	135	S1+	70 - 130	04/19/23 14:56	04/19/23 23:42	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79.3		5.05	mg/Kg			04/25/23 17:53	1

Client Sample ID: SW02

Lab Sample ID: 890-4531-7

Date Collected: 04/17/23 11:10

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 0-2.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/20/23 04:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/20/23 04:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/20/23 04:19	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/19/23 11:07	04/20/23 04:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/20/23 04:19	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/19/23 11:07	04/20/23 04:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	04/19/23 11:07	04/20/23 04:19	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: SW02

Lab Sample ID: 890-4531-7

Date Collected: 04/17/23 11:10

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 0-2.0'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	90		70 - 130	04/19/23 11:07	04/20/23 04:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			04/20/23 09:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/20/23 09:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/20/23 00:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/20/23 00:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/20/23 00:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	152	S1+	70 - 130			04/19/23 14:56	04/20/23 00:04	1
o-Terphenyl	142	S1+	70 - 130			04/19/23 14:56	04/20/23 00:04	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	96.3		4.98	mg/Kg			04/25/23 17:58	1

Client Sample ID: SW03

Lab Sample ID: 890-4531-8

Date Collected: 04/17/23 11:15

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 0-2.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/19/23 11:07	04/20/23 04:40	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/19/23 11:07	04/20/23 04:40	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/19/23 11:07	04/20/23 04:40	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/19/23 11:07	04/20/23 04:40	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/19/23 11:07	04/20/23 04:40	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/19/23 11:07	04/20/23 04:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	04/19/23 11:07	04/20/23 04:40	1
1,4-Difluorobenzene (Surr)	81		70 - 130	04/19/23 11:07	04/20/23 04:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			04/20/23 09:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/20/23 09:13	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: SW03

Lab Sample ID: 890-4531-8

Date Collected: 04/17/23 11:15

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 0-2.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/20/23 00:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/20/23 00:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/20/23 00:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	153	S1+	70 - 130			04/19/23 14:56	04/20/23 00:25	1
o-Terphenyl	144	S1+	70 - 130			04/19/23 14:56	04/20/23 00:25	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	72.3		4.99	mg/Kg			04/25/23 18:03	1

Client Sample ID: SW04

Lab Sample ID: 890-4531-9

Date Collected: 04/17/23 11:20

Matrix: Solid

Date Received: 04/17/23 16:16

Sample Depth: 0-2.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/19/23 11:07	04/20/23 05:00	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/19/23 11:07	04/20/23 05:00	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/19/23 11:07	04/20/23 05:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/19/23 11:07	04/20/23 05:00	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/19/23 11:07	04/20/23 05:00	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/19/23 11:07	04/20/23 05:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			04/19/23 11:07	04/20/23 05:00	1
1,4-Difluorobenzene (Surr)	80		70 - 130			04/19/23 11:07	04/20/23 05:00	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/20/23 09:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	53.9		49.9	mg/Kg			04/20/23 09:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/20/23 00:46	1
Diesel Range Organics (Over C10-C28)	53.9		49.9	mg/Kg		04/19/23 14:56	04/20/23 00:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/19/23 14:56	04/20/23 00:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	147	S1+	70 - 130			04/19/23 14:56	04/20/23 00:46	1
o-Terphenyl	137	S1+	70 - 130			04/19/23 14:56	04/20/23 00:46	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: SW04
Date Collected: 04/17/23 11:20
Date Received: 04/17/23 16:16
Sample Depth: 0-2.0'

Lab Sample ID: 890-4531-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	41.8		5.05	mg/Kg			04/25/23 18:08	1	

Surrogate Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

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)
880-27315-A-1-A MS	Matrix Spike	90	66 S1-
880-27315-A-1-B MSD	Matrix Spike Duplicate	107	76
880-27323-A-1-B MSD	Matrix Spike Duplicate	95	100
880-27323-A-1-G MS	Matrix Spike	101	111
890-4531-1	FS01	109	72
890-4531-2	FS02	133 S1+	84
890-4531-3	FS03	144 S1+	78
890-4531-4	FS04	134 S1+	83
890-4531-5	FS05	120	80
890-4531-6	SW01	136 S1+	80
890-4531-7	SW02	120	90
890-4531-8	SW03	116	81
890-4531-9	SW04	116	80
LCS 880-51473/1-A	Lab Control Sample	110	86
LCS 880-51488/1-A	Lab Control Sample	118	108
LCSD 880-51473/2-A	Lab Control Sample Dup	109	82
LCSD 880-51488/2-A	Lab Control Sample Dup	120	112
MB 880-51436/5-A	Method Blank	80	92
MB 880-51473/5-A	Method Blank	70	79
MB 880-51488/5-A	Method Blank	90	93
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)
890-4531-1	FS01	147 S1+	139 S1+
890-4531-1 MS	FS01	157 S1+	130
890-4531-1 MSD	FS01	150 S1+	126
890-4531-2	FS02	147 S1+	139 S1+
890-4531-3	FS03	145 S1+	139 S1+
890-4531-4	FS04	147 S1+	134 S1+
890-4531-5	FS05	144 S1+	138 S1+
890-4531-6	SW01	145 S1+	135 S1+
890-4531-7	SW02	152 S1+	142 S1+
890-4531-8	SW03	153 S1+	144 S1+
890-4531-9	SW04	147 S1+	137 S1+
LCS 880-51528/2-A	Lab Control Sample	122	114
LCSD 880-51528/3-A	Lab Control Sample Dup	120	114
MB 880-51528/1-A	Method Blank	156 S1+	160 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-51436/5-A

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51436

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/18/23 17:00	04/19/23 11:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/18/23 17:00	04/19/23 11:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/18/23 17:00	04/19/23 11:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/18/23 17:00	04/19/23 11:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/18/23 17:00	04/19/23 11:33	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/18/23 17:00	04/19/23 11:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130	04/18/23 17:00	04/19/23 11:33	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/18/23 17:00	04/19/23 11:33	1

Lab Sample ID: MB 880-51473/5-A

Matrix: Solid

Analysis Batch: 51573

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51473

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/23 10:41	04/20/23 12:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/23 10:41	04/20/23 12:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/23 10:41	04/20/23 12:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/19/23 10:41	04/20/23 12:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/23 10:41	04/20/23 12:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/19/23 10:41	04/20/23 12:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	70		70 - 130	04/19/23 10:41	04/20/23 12:39	1
1,4-Difluorobenzene (Surr)	79		70 - 130	04/19/23 10:41	04/20/23 12:39	1

Lab Sample ID: LCS 880-51473/1-A

Matrix: Solid

Analysis Batch: 51573

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09822		mg/Kg		98	70 - 130
Toluene	0.100	0.09510		mg/Kg		95	70 - 130
Ethylbenzene	0.100	0.1064		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	0.200	0.2079		mg/Kg		104	70 - 130
o-Xylene	0.100	0.1045		mg/Kg		105	70 - 130

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

Lab Sample ID: LCSD 880-51473/2-A

Matrix: Solid

Analysis Batch: 51573

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51473

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09469		mg/Kg		95	70 - 130	4	35

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

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

Lab Sample ID: LCSD 880-51473/2-A

Matrix: Solid

Analysis Batch: 51573

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51473

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.09602		mg/Kg		96	70 - 130	1	35
Ethylbenzene	0.100	0.1000		mg/Kg		100	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1958		mg/Kg		98	70 - 130	6	35
o-Xylene	0.100	0.09700		mg/Kg		97	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	82		70 - 130

Lab Sample ID: 880-27315-A-1-A MS

Matrix: Solid

Analysis Batch: 51573

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 51473

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U F2 F1	0.0998	0.01602	F1	mg/Kg		16	70 - 130
Toluene	<0.00198	U F1	0.0998	0.01530	F1	mg/Kg		15	70 - 130
Ethylbenzene	<0.00198	U F1	0.0998	0.01656	F1	mg/Kg		17	70 - 130
m-Xylene & p-Xylene	<0.00396	U F1	0.200	0.009926	F1	mg/Kg		5	70 - 130
o-Xylene	<0.00198	U F1	0.0998	0.03031	F1	mg/Kg		30	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130

Lab Sample ID: 880-27315-A-1-B MSD

Matrix: Solid

Analysis Batch: 51573

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 51473

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U F2 F1	0.100	0.009884	F2 F1	mg/Kg		10	70 - 130	47	35
Toluene	<0.00198	U F1	0.100	0.01078	F1	mg/Kg		11	70 - 130	35	35
Ethylbenzene	<0.00198	U F1	0.100	0.01205	F1	mg/Kg		12	70 - 130	32	35
m-Xylene & p-Xylene	<0.00396	U F1	0.201	0.01076	F1	mg/Kg		5	70 - 130	8	35
o-Xylene	<0.00198	U F1	0.100	0.02355	F1	mg/Kg		23	70 - 130	25	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	76		70 - 130

Lab Sample ID: MB 880-51488/5-A

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51488

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/19/23 22:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/19/23 22:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/19/23 22:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/19/23 11:07	04/19/23 22:09	1

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

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

Lab Sample ID: MB 880-51488/5-A

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51488

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/23 11:07	04/19/23 22:09	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/19/23 11:07	04/19/23 22:09	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130			04/19/23 11:07	04/19/23 22:09	1
1,4-Difluorobenzene (Surr)	93		70 - 130			04/19/23 11:07	04/19/23 22:09	1

Lab Sample ID: LCS 880-51488/1-A

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51488

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09614		mg/Kg		96	70 - 130
Toluene	0.100	0.08906		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09490		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	0.200	0.2037		mg/Kg		102	70 - 130
o-Xylene	0.100	0.1039		mg/Kg		104	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	118		70 - 130				
1,4-Difluorobenzene (Surr)	108		70 - 130				

Lab Sample ID: LCSD 880-51488/2-A

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51488

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1062		mg/Kg		106	70 - 130	10	35
Toluene	0.100	0.09808		mg/Kg		98	70 - 130	10	35
Ethylbenzene	0.100	0.1037		mg/Kg		104	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2230		mg/Kg		112	70 - 130	9	35
o-Xylene	0.100	0.1139		mg/Kg		114	70 - 130	9	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	120		70 - 130						
1,4-Difluorobenzene (Surr)	112		70 - 130						

Lab Sample ID: 880-27323-A-1-B MSD

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 51488

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0990	0.06612	F1	mg/Kg		67	70 - 130	23	35
Toluene	<0.00200	U F1	0.0990	0.06625	F1	mg/Kg		67	70 - 130	7	35
Ethylbenzene	<0.00200	U F1	0.0990	0.06788	F1	mg/Kg		69	70 - 130	3	35
m-Xylene & p-Xylene	<0.00399	U F1	0.198	0.1264	F1	mg/Kg		64	70 - 130	7	35
o-Xylene	<0.00200	U F1	0.0990	0.06375	F1	mg/Kg		64	70 - 130	9	35

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

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

Lab Sample ID: 880-27323-A-1-B MSD

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 51488

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-27323-A-1-G MS

Matrix: Solid

Analysis Batch: 51464

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 51488

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1	0.100	0.08319		mg/Kg		83	70 - 130
Toluene	<0.00200	U F1	0.100	0.07107		mg/Kg		71	70 - 130
Ethylbenzene	<0.00200	U F1	0.100	0.06984		mg/Kg		70	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.201	0.1353	F1	mg/Kg		67	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.06952	F1	mg/Kg		69	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

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

Lab Sample ID: MB 880-51528/1-A

Matrix: Solid

Analysis Batch: 51456

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51528

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		04/19/23 14:56	04/19/23 20:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/19/23 20:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/19/23 14:56	04/19/23 20:06	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	156	S1+	70 - 130	04/19/23 14:56	04/19/23 20:06	1		
o-Terphenyl	160	S1+	70 - 130	04/19/23 14:56	04/19/23 20:06	1		

Lab Sample ID: LCS 880-51528/2-A

Matrix: Solid

Analysis Batch: 51456

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	987.3		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	1000	979.6		mg/Kg		98	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	114		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

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

Lab Sample ID: LCSD 880-51528/3-A

Matrix: Solid

Analysis Batch: 51456

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51528

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	937.8		mg/Kg		94	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	934.4		mg/Kg		93	70 - 130	5	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	120		70 - 130						
o-Terphenyl	114		70 - 130						

Lab Sample ID: 890-4531-1 MS

Matrix: Solid

Analysis Batch: 51456

Client Sample ID: FS01

Prep Type: Total/NA

Prep Batch: 51528

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1297		mg/Kg		127	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	1473	F1	mg/Kg		147	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	157	S1+	70 - 130								
o-Terphenyl	130		70 - 130								

Lab Sample ID: 890-4531-1 MSD

Matrix: Solid

Analysis Batch: 51456

Client Sample ID: FS01

Prep Type: Total/NA

Prep Batch: 51528

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	1000	1285		mg/Kg		126	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1000	1416	F1	mg/Kg		142	70 - 130	4	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	150	S1+	70 - 130								
o-Terphenyl	126		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-51747/1-A

Matrix: Solid

Analysis Batch: 51980

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			04/25/23 16:55	1

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-51747/2-A				Client Sample ID: Lab Control Sample							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 51980											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	257.8		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-51747/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 51980											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	251.5		mg/Kg		101	90 - 110	2	20

Lab Sample ID: 890-4531-1 MS				Client Sample ID: FS01							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 51980											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	66.6	F1	249	357.9	F1	mg/Kg		117	90 - 110		

Lab Sample ID: 890-4531-1 MSD				Client Sample ID: FS01							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 51980											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	66.6	F1	249	350.3	F1	mg/Kg		114	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

GC VOA

Prep Batch: 51436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-51436/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 51464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-7	SW02	Total/NA	Solid	8021B	51488
890-4531-8	SW03	Total/NA	Solid	8021B	51488
890-4531-9	SW04	Total/NA	Solid	8021B	51488
MB 880-51436/5-A	Method Blank	Total/NA	Solid	8021B	51436
MB 880-51488/5-A	Method Blank	Total/NA	Solid	8021B	51488
LCS 880-51488/1-A	Lab Control Sample	Total/NA	Solid	8021B	51488
LCSD 880-51488/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	51488
880-27323-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	51488
880-27323-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	51488

Prep Batch: 51473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Total/NA	Solid	5035	
890-4531-2	FS02	Total/NA	Solid	5035	
890-4531-3	FS03	Total/NA	Solid	5035	
890-4531-4	FS04	Total/NA	Solid	5035	
890-4531-5	FS05	Total/NA	Solid	5035	
890-4531-6	SW01	Total/NA	Solid	5035	
MB 880-51473/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-51473/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-51473/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-27315-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-27315-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 51488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-7	SW02	Total/NA	Solid	5035	
890-4531-8	SW03	Total/NA	Solid	5035	
890-4531-9	SW04	Total/NA	Solid	5035	
MB 880-51488/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-51488/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-51488/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-27323-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
880-27323-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 51573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Total/NA	Solid	8021B	51473
890-4531-2	FS02	Total/NA	Solid	8021B	51473
890-4531-3	FS03	Total/NA	Solid	8021B	51473
890-4531-4	FS04	Total/NA	Solid	8021B	51473
890-4531-5	FS05	Total/NA	Solid	8021B	51473
890-4531-6	SW01	Total/NA	Solid	8021B	51473
MB 880-51473/5-A	Method Blank	Total/NA	Solid	8021B	51473
LCS 880-51473/1-A	Lab Control Sample	Total/NA	Solid	8021B	51473
LCSD 880-51473/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	51473
880-27315-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	51473

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

GC VOA (Continued)

Analysis Batch: 51573 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-27315-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	51473

Analysis Batch: 51593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Total/NA	Solid	Total BTEX	
890-4531-2	FS02	Total/NA	Solid	Total BTEX	
890-4531-3	FS03	Total/NA	Solid	Total BTEX	
890-4531-4	FS04	Total/NA	Solid	Total BTEX	
890-4531-5	FS05	Total/NA	Solid	Total BTEX	
890-4531-6	SW01	Total/NA	Solid	Total BTEX	
890-4531-7	SW02	Total/NA	Solid	Total BTEX	
890-4531-8	SW03	Total/NA	Solid	Total BTEX	
890-4531-9	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 51456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Total/NA	Solid	8015B NM	51528
890-4531-2	FS02	Total/NA	Solid	8015B NM	51528
890-4531-3	FS03	Total/NA	Solid	8015B NM	51528
890-4531-4	FS04	Total/NA	Solid	8015B NM	51528
890-4531-5	FS05	Total/NA	Solid	8015B NM	51528
890-4531-6	SW01	Total/NA	Solid	8015B NM	51528
890-4531-7	SW02	Total/NA	Solid	8015B NM	51528
890-4531-8	SW03	Total/NA	Solid	8015B NM	51528
890-4531-9	SW04	Total/NA	Solid	8015B NM	51528
MB 880-51528/1-A	Method Blank	Total/NA	Solid	8015B NM	51528
LCS 880-51528/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	51528
LCSD 880-51528/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	51528
890-4531-1 MS	FS01	Total/NA	Solid	8015B NM	51528
890-4531-1 MSD	FS01	Total/NA	Solid	8015B NM	51528

Prep Batch: 51528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Total/NA	Solid	8015NM Prep	
890-4531-2	FS02	Total/NA	Solid	8015NM Prep	
890-4531-3	FS03	Total/NA	Solid	8015NM Prep	
890-4531-4	FS04	Total/NA	Solid	8015NM Prep	
890-4531-5	FS05	Total/NA	Solid	8015NM Prep	
890-4531-6	SW01	Total/NA	Solid	8015NM Prep	
890-4531-7	SW02	Total/NA	Solid	8015NM Prep	
890-4531-8	SW03	Total/NA	Solid	8015NM Prep	
890-4531-9	SW04	Total/NA	Solid	8015NM Prep	
MB 880-51528/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-51528/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-51528/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4531-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-4531-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

GC Semi VOA

Analysis Batch: 51584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Total/NA	Solid	8015 NM	
890-4531-2	FS02	Total/NA	Solid	8015 NM	
890-4531-3	FS03	Total/NA	Solid	8015 NM	
890-4531-4	FS04	Total/NA	Solid	8015 NM	
890-4531-5	FS05	Total/NA	Solid	8015 NM	
890-4531-6	SW01	Total/NA	Solid	8015 NM	
890-4531-7	SW02	Total/NA	Solid	8015 NM	
890-4531-8	SW03	Total/NA	Solid	8015 NM	
890-4531-9	SW04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 51747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Soluble	Solid	DI Leach	
890-4531-2	FS02	Soluble	Solid	DI Leach	
890-4531-3	FS03	Soluble	Solid	DI Leach	
890-4531-4	FS04	Soluble	Solid	DI Leach	
890-4531-5	FS05	Soluble	Solid	DI Leach	
890-4531-6	SW01	Soluble	Solid	DI Leach	
890-4531-7	SW02	Soluble	Solid	DI Leach	
890-4531-8	SW03	Soluble	Solid	DI Leach	
890-4531-9	SW04	Soluble	Solid	DI Leach	
MB 880-51747/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-51747/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-51747/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4531-1 MS	FS01	Soluble	Solid	DI Leach	
890-4531-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 51980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4531-1	FS01	Soluble	Solid	300.0	51747
890-4531-2	FS02	Soluble	Solid	300.0	51747
890-4531-3	FS03	Soluble	Solid	300.0	51747
890-4531-4	FS04	Soluble	Solid	300.0	51747
890-4531-5	FS05	Soluble	Solid	300.0	51747
890-4531-6	SW01	Soluble	Solid	300.0	51747
890-4531-7	SW02	Soluble	Solid	300.0	51747
890-4531-8	SW03	Soluble	Solid	300.0	51747
890-4531-9	SW04	Soluble	Solid	300.0	51747
MB 880-51747/1-A	Method Blank	Soluble	Solid	300.0	51747
LCS 880-51747/2-A	Lab Control Sample	Soluble	Solid	300.0	51747
LCSD 880-51747/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	51747
890-4531-1 MS	FS01	Soluble	Solid	300.0	51747
890-4531-1 MSD	FS01	Soluble	Solid	300.0	51747

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Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: FS01

Date Collected: 04/17/23 09:30

Date Received: 04/17/23 16:16

Lab Sample ID: 890-4531-1

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			5.02 g	5 mL	51473	04/19/23 17:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51573	04/20/23 20:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/21/23 13:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/19/23 21:12	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 17:10	SMC	EET MID

Client Sample ID: FS02

Date Collected: 04/17/23 10:00

Date Received: 04/17/23 16:16

Lab Sample ID: 890-4531-2

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	51473	04/19/23 17:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51573	04/20/23 21:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/21/23 13:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/19/23 22:16	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 17:24	SMC	EET MID

Client Sample ID: FS03

Date Collected: 04/17/23 10:15

Date Received: 04/17/23 16:16

Lab Sample ID: 890-4531-3

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	51473	04/19/23 17:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51573	04/20/23 21:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/21/23 13:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/19/23 22:38	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 17:29	SMC	EET MID

Client Sample ID: FS04

Date Collected: 04/17/23 10:30

Date Received: 04/17/23 16:16

Lab Sample ID: 890-4531-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	51473	04/19/23 17:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51573	04/20/23 21:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/21/23 13:10	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: FS04

Lab Sample ID: 890-4531-4

Date Collected: 04/17/23 10:30

Matrix: Solid

Date Received: 04/17/23 16:16

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			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/19/23 22:59	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 17:34	SMC	EET MID

Client Sample ID: FS05

Lab Sample ID: 890-4531-5

Date Collected: 04/17/23 10:45

Matrix: Solid

Date Received: 04/17/23 16:16

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	51473	04/19/23 17:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51573	04/20/23 22:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/21/23 13:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/19/23 23:21	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 17:39	SMC	EET MID

Client Sample ID: SW01

Lab Sample ID: 890-4531-6

Date Collected: 04/17/23 11:05

Matrix: Solid

Date Received: 04/17/23 16:16

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	51473	04/19/23 17:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51573	04/20/23 22:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/21/23 13:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/19/23 23:42	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 17:53	SMC	EET MID

Client Sample ID: SW02

Lab Sample ID: 890-4531-7

Date Collected: 04/17/23 11:10

Matrix: Solid

Date Received: 04/17/23 16:16

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	51488	04/19/23 11:07	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51464	04/20/23 04:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/20/23 09:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/20/23 00:04	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Client Sample ID: SW02
Date Collected: 04/17/23 11:10
Date Received: 04/17/23 16:16

Lab Sample ID: 890-4531-7
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			5.02 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 17:58	SMC	EET MID

Client Sample ID: SW03
Date Collected: 04/17/23 11:15
Date Received: 04/17/23 16:16

Lab Sample ID: 890-4531-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	51488	04/19/23 11:07	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51464	04/20/23 04:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/20/23 09:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/20/23 00:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 18:03	SMC	EET MID

Client Sample ID: SW04
Date Collected: 04/17/23 11:20
Date Received: 04/17/23 16:16

Lab Sample ID: 890-4531-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	51488	04/19/23 11:07	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51464	04/20/23 05:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51593	04/20/23 09:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			51584	04/20/23 09:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51528	04/19/23 14:56	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51456	04/20/23 00:46	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	51747	04/21/23 14:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51980	04/25/23 18:08	SMC	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Laboratory: Eurofins Midland

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

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

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4531-1
SDG: 03D2024173

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4531-1	FS01	Solid	04/17/23 09:30	04/17/23 16:16	1.5'
890-4531-2	FS02	Solid	04/17/23 10:00	04/17/23 16:16	1.5'
890-4531-3	FS03	Solid	04/17/23 10:15	04/17/23 16:16	1.5'
890-4531-4	FS04	Solid	04/17/23 10:30	04/17/23 16:16	2.0'
890-4531-5	FS05	Solid	04/17/23 10:45	04/17/23 16:16	2.0'
890-4531-6	SW01	Solid	04/17/23 11:05	04/17/23 16:16	0-2.0'
890-4531-7	SW02	Solid	04/17/23 11:10	04/17/23 16:16	0-2.0'
890-4531-8	SW03	Solid	04/17/23 11:15	04/17/23 16:16	0-2.0'
890-4531-9	SW04	Solid	04/17/23 11:20	04/17/23 16:16	0-2.0'

- 1
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- 10
- 11
- 12
- 13
- 14



Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments	
Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: _____

Project Name:		Turn Around		ANALYSIS REQUEST										Preservative Codes								
Project Number:		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush												None: NO		DI Water: H ₂ O						
Project Location:		Due Date:												Cool: Cool		MeOH: Me						
Sampler's Name:		TAT starts the day received by the lab, if received by 4:30pm												HCL: HC		HNO ₃ : HN						
PO #:														H ₂ SO ₄ : H ₂		NaOH: Na						
SAMPLE RECEIPT		Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No												Wet Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		H ₃ PO ₄ : HP						
Samples Received Intact:		Thermometer ID:		Correction Factor:		NaHSO ₄ : NABIS																
Cooler Custody Seals:		Temperature Reading:		Corrected Temperature:		Na ₂ S ₂ O ₃ : NaSO ₃																
Sample Custody Seals:						Zn Acetate+NaOH: Zn																
Total Containers:						NaOH+Ascorbic Acid: SAPC																
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)											Sample Comments	
FS01		Soil	4/17/2023	930	1.5'	Comp	1	x	x	x												
FS02		Soil	4/17/2023	1000	1.5'	Comp	1	x	x	x												
FS03		Soil	4/17/2023	1015	1.5'	Comp	1	x	x	x												
FS04		Soil	4/17/2023	1030	2.0'	Comp	1	x	x	x												
FS05		Soil	4/17/2023	1045	2.0'	Comp	1	x	x	x												
SW01		Soil	4/17/2023	1105	0'-2.0'	Comp	1	x	x	x												
SW02		Soil	4/17/2023	1110	0'-2.0'	Comp	1	x	x	x												
SW03		Soil	4/17/2023	1115	0'-2.0'	Comp	1	x	x	x												
SW04		Soil	4/17/2023	1120	0'-2.0'	Comp	1	x	x	x												

Total 200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas	11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	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	Ti	U	Hg: 1631 / 245.1 / 7470 / 7471													

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/17/23 1616	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4531-1

SDG Number: 03D2024173

Login Number: 4531

List Number: 1

Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4531-1

SDG Number: 03D2024173

Login Number: 4531

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 04/19/23 10:52 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	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/28/2023 10:25:59 AM Revision 1

JOB DESCRIPTION

Wilder 28 Federal 001H
SDG NUMBER 03D2024173

JOB NUMBER

890-4537-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Generated
4/28/2023 10:25:59 AM
Revision 1

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Laboratory Job ID: 890-4537-1
SDG: 03D2024173

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Definitions/Glossary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

Eurofins Carlsbad

Case Narrative

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Job ID: 890-4537-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-4537-1**REVISION

The report being provided is a revision of the original report sent on 4/26/2023. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Receipt

The samples were received on 4/18/2023 3:33 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 4.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS06 (890-4537-1), FS07 (890-4537-2), FS08 (890-4537-3), FS09 (890-4537-4), FS10 (890-4537-5), FS11 (890-4537-6), FS12 (890-4537-7), FS13 (890-4537-8), FS14 (890-4537-9), FS15 (890-4537-10), FS16 (890-4537-11) and FS17 (890-4537-12).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS06 (890-4537-1) and FS07 (890-4537-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-51651/1-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS14 (890-4537-9) and FS16 (890-4537-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-51720 and analytical batch 880-51776 contained Gasoline Range Organics (GRO)-C6-C10, Diesel Range Organics (Over C10-C28) and Total TPH above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-52125/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS06 (890-4537-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-52069/31). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-52125 and analytical batch 880-52069 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: CCV biased low however an acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported.(CCV 880-52069/31)

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

Case Narrative

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Job ID: 890-4537-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-51899 and 880-51899 and analytical batch 880-51979 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. The associated samples are: FS16 (890-4537-11), FS17 (890-4537-12), (880-27360-A-11-C), (880-27360-A-11-D MS) and (880-27360-A-11-E MSD).

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: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS06

Lab Sample ID: 890-4537-1

Date Collected: 04/18/23 09:00

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		04/19/23 16:34	04/20/23 17:57	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/19/23 16:34	04/20/23 17:57	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/19/23 16:34	04/20/23 17:57	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/19/23 16:34	04/20/23 17:57	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/19/23 16:34	04/20/23 17:57	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		04/19/23 16:34	04/20/23 17:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	04/19/23 16:34	04/20/23 17:57	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/19/23 16:34	04/20/23 17:57	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	268		50.0	mg/Kg			04/21/23 17:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/27/23 13:41	04/27/23 19:22	1
Diesel Range Organics (Over C10-C28)	268		50.0	mg/Kg		04/27/23 13:41	04/27/23 19:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/27/23 13:41	04/27/23 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	61	S1-	70 - 130	04/27/23 13:41	04/27/23 19:22	1
o-Terphenyl	62	S1-	70 - 130	04/27/23 13:41	04/27/23 19:22	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	360		5.03	mg/Kg			04/26/23 00:28	1

Client Sample ID: FS07

Lab Sample ID: 890-4537-2

Date Collected: 04/18/23 09:35

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:18	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:18	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/19/23 16:34	04/20/23 18:18	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:18	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/19/23 16:34	04/20/23 18:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130	04/19/23 16:34	04/20/23 18:18	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS07

Lab Sample ID: 890-4537-2

Date Collected: 04/18/23 09:35

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	107		70 - 130	04/19/23 16:34	04/20/23 18:18	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	74.7		50.0	mg/Kg			04/24/23 10:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/20/23 16:48	04/21/23 16:55	1
Diesel Range Organics (Over C10-C28)	74.7		50.0	mg/Kg		04/20/23 16:48	04/21/23 16:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/23 16:48	04/21/23 16:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130			04/20/23 16:48	04/21/23 16:55	1
o-Terphenyl	111		70 - 130			04/20/23 16:48	04/21/23 16:55	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	183		4.95	mg/Kg			04/26/23 00:41	1

Client Sample ID: FS08

Lab Sample ID: 890-4537-3

Date Collected: 04/18/23 09:40

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:38	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:38	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/19/23 16:34	04/20/23 18:38	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/19/23 16:34	04/20/23 18:38	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/19/23 16:34	04/20/23 18:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	04/19/23 16:34	04/20/23 18:38	1
1,4-Difluorobenzene (Surr)	84		70 - 130	04/19/23 16:34	04/20/23 18:38	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	91.3		50.0	mg/Kg			04/24/23 10:59	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS08

Lab Sample ID: 890-4537-3

Date Collected: 04/18/23 09:40

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/27/23 13:41	04/27/23 19:43	1
Diesel Range Organics (Over C10-C28)	91.3		50.0	mg/Kg		04/27/23 13:41	04/27/23 19:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/27/23 13:41	04/27/23 19:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130			04/27/23 13:41	04/27/23 19:43	1
o-Terphenyl	70		70 - 130			04/27/23 13:41	04/27/23 19:43	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	468		5.03	mg/Kg			04/26/23 00:46	1

Client Sample ID: FS09

Lab Sample ID: 890-4537-4

Date Collected: 04/18/23 10:20

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 18:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 18:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 18:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/19/23 16:34	04/20/23 18:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 18:59	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/19/23 16:34	04/20/23 18:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130			04/19/23 16:34	04/20/23 18:59	1
1,4-Difluorobenzene (Surr)	108		70 - 130			04/19/23 16:34	04/20/23 18:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			04/24/23 10:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		04/20/23 16:48	04/21/23 17:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/20/23 16:48	04/21/23 17:39	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/20/23 16:48	04/21/23 17:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130			04/20/23 16:48	04/21/23 17:39	1
o-Terphenyl	111		70 - 130			04/20/23 16:48	04/21/23 17:39	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS09

Date Collected: 04/18/23 10:20

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

Lab Sample ID: 890-4537-4

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.6		5.05	mg/Kg			04/26/23 15:09	1

Client Sample ID: FS10

Date Collected: 04/18/23 10:25

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

Lab Sample ID: 890-4537-5

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/19/23 16:34	04/20/23 19:20	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/19/23 16:34	04/20/23 19:20	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/19/23 16:34	04/20/23 19:20	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/19/23 16:34	04/20/23 19:20	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/19/23 16:34	04/20/23 19:20	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/19/23 16:34	04/20/23 19:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			04/19/23 16:34	04/20/23 19:20	1
1,4-Difluorobenzene (Surr)	105		70 - 130			04/19/23 16:34	04/20/23 19:20	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/24/23 10:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/20/23 16:48	04/21/23 18:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/20/23 16:48	04/21/23 18:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/23 16:48	04/21/23 18:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130			04/20/23 16:48	04/21/23 18:01	1
o-Terphenyl	117		70 - 130			04/20/23 16:48	04/21/23 18:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	123		5.05	mg/Kg			04/26/23 01:04	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS11

Lab Sample ID: 890-4537-6

Date Collected: 04/18/23 11:00

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/20/23 22:26	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/20/23 22:26	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/20/23 22:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/20/23 11:43	04/20/23 22:26	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/20/23 22:26	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/20/23 11:43	04/20/23 22:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	04/20/23 11:43	04/20/23 22:26	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/20/23 11:43	04/20/23 22:26	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/24/23 10:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/20/23 16:48	04/21/23 18:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/20/23 16:48	04/21/23 18:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/20/23 16:48	04/21/23 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	04/20/23 16:48	04/21/23 18:23	1
o-Terphenyl	111		70 - 130	04/20/23 16:48	04/21/23 18:23	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	135		4.99	mg/Kg			04/26/23 01:09	1

Client Sample ID: FS12

Lab Sample ID: 890-4537-7

Date Collected: 04/18/23 11:05

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 22:47	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 22:47	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 22:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/20/23 22:47	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 22:47	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/20/23 22:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130	04/20/23 11:43	04/20/23 22:47	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS12

Lab Sample ID: 890-4537-7

Date Collected: 04/18/23 11:05

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	107		70 - 130	04/20/23 11:43	04/20/23 22:47	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	86.5		49.8	mg/Kg			04/24/23 10:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		04/20/23 16:48	04/21/23 18:45	1
Diesel Range Organics (Over C10-C28)	86.5		49.8	mg/Kg		04/20/23 16:48	04/21/23 18:45	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/20/23 16:48	04/21/23 18:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130			04/20/23 16:48	04/21/23 18:45	1
o-Terphenyl	113		70 - 130			04/20/23 16:48	04/21/23 18:45	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	375		4.96	mg/Kg			04/26/23 01:13	1

Client Sample ID: FS13

Lab Sample ID: 890-4537-8

Date Collected: 04/18/23 11:20

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:07	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:07	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/20/23 23:07	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:07	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/20/23 23:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130	04/20/23 11:43	04/20/23 23:07	1
1,4-Difluorobenzene (Surr)	109		70 - 130	04/20/23 11:43	04/20/23 23:07	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/24/23 11:55	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS13

Lab Sample ID: 890-4537-8

Date Collected: 04/18/23 11:20

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 03:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 03:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 03:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130			04/21/23 14:02	04/23/23 03:38	1
o-Terphenyl	115		70 - 130			04/21/23 14:02	04/23/23 03:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	135		4.95	mg/Kg			04/26/23 01:18	1

Client Sample ID: FS14

Lab Sample ID: 890-4537-9

Date Collected: 04/18/23 11:25

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:28	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:28	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:28	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/20/23 23:28	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/20/23 23:28	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/20/23 23:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130			04/20/23 11:43	04/20/23 23:28	1
1,4-Difluorobenzene (Surr)	105		70 - 130			04/20/23 11:43	04/20/23 23:28	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/24/23 11:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/21/23 14:02	04/23/23 03:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/21/23 14:02	04/23/23 03:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/21/23 14:02	04/23/23 03:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	134	S1+	70 - 130			04/21/23 14:02	04/23/23 03:59	1
o-Terphenyl	126		70 - 130			04/21/23 14:02	04/23/23 03:59	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS14

Date Collected: 04/18/23 11:25

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

Lab Sample ID: 890-4537-9

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	115		4.99	mg/Kg			04/26/23 01:22	1

Client Sample ID: FS15

Date Collected: 04/18/23 12:30

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

Lab Sample ID: 890-4537-10

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 23:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 23:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 23:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/20/23 11:43	04/20/23 23:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 23:49	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/20/23 11:43	04/20/23 23:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130			04/20/23 11:43	04/20/23 23:49	1
1,4-Difluorobenzene (Surr)	106		70 - 130			04/20/23 11:43	04/20/23 23:49	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/24/23 11:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 04:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 04:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 04:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130			04/21/23 14:02	04/23/23 04:20	1
o-Terphenyl	121		70 - 130			04/21/23 14:02	04/23/23 04:20	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	67.3		5.00	mg/Kg			04/26/23 01:27	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS16

Lab Sample ID: 890-4537-11

Date Collected: 04/18/23 12:35

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/21/23 00:10	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/21/23 00:10	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/21/23 00:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/20/23 11:43	04/21/23 00:10	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/20/23 11:43	04/21/23 00:10	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/20/23 11:43	04/21/23 00:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130	04/20/23 11:43	04/21/23 00:10	1
1,4-Difluorobenzene (Surr)	106		70 - 130	04/20/23 11:43	04/21/23 00:10	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/24/23 11:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/21/23 14:02	04/23/23 04:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/21/23 14:02	04/23/23 04:41	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/21/23 14:02	04/23/23 04:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	140	S1+	70 - 130	04/21/23 14:02	04/23/23 04:41	1
o-Terphenyl	135	S1+	70 - 130	04/21/23 14:02	04/23/23 04:41	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74.4		5.00	mg/Kg			04/25/23 15:14	1

Client Sample ID: FS17

Lab Sample ID: 890-4537-12

Date Collected: 04/18/23 12:40

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/21/23 00:30	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/21/23 00:30	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/21/23 00:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/21/23 00:30	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/20/23 11:43	04/21/23 00:30	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/20/23 11:43	04/21/23 00:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	04/20/23 11:43	04/21/23 00:30	1

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Client Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS17

Lab Sample ID: 890-4537-12

Date Collected: 04/18/23 12:40

Matrix: Solid

Date Received: 04/18/23 15:33

Sample Depth: 1.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	107		70 - 130	04/20/23 11:43	04/21/23 00:30	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/21/23 14:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/24/23 11:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 05:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 05:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/23/23 05:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130			04/21/23 14:02	04/23/23 05:01	1
o-Terphenyl	119		70 - 130			04/21/23 14:02	04/23/23 05:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55.3		5.02	mg/Kg			04/25/23 15:27	1

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Surrogate Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-4537-1	FS06	133 S1+	103
890-4537-2	FS07	131 S1+	107
890-4537-3	FS08	71	84
890-4537-4	FS09	118	108
890-4537-5	FS10	122	105
890-4537-6	FS11	116	103
890-4537-6 MS	FS11	115	95
890-4537-6 MSD	FS11	111	98
890-4537-7	FS12	129	107
890-4537-8	FS13	119	109
890-4537-9	FS14	127	105
890-4537-10	FS15	118	106
890-4537-11	FS16	121	106
890-4537-12	FS17	123	107
LCS 880-51535/1-A	Lab Control Sample	122	97
LCS 880-51615/1-A	Lab Control Sample	118	96
LCSD 880-51535/2-A	Lab Control Sample Dup	122	94
LCSD 880-51615/2-A	Lab Control Sample Dup	120	97
MB 880-51535/5-A	Method Blank	110	84
MB 880-51615/5-A	Method Blank	112	86

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	OTPH1
		(70-130)	(70-130)
880-27391-A-1-C MS	Matrix Spike	120	106
880-27391-A-1-D MSD	Matrix Spike Duplicate	115	101
880-27467-A-1-F MS	Matrix Spike	111	90
880-27467-A-1-G MSD	Matrix Spike Duplicate	115	96
890-4537-1	FS06	61 S1-	62 S1-
890-4537-2	FS07	114	111
890-4537-3	FS08	71	70
890-4537-4	FS09	114	111
890-4537-5	FS10	120	117
890-4537-6	FS11	113	111
890-4537-7	FS12	117	113
890-4537-8	FS13	120	115
890-4537-9	FS14	134 S1+	126
890-4537-10	FS15	128	121
890-4537-11	FS16	140 S1+	135 S1+
890-4537-12	FS17	127	119
890-4577-A-13-C MS	Matrix Spike	76	71
890-4577-A-13-D MSD	Matrix Spike Duplicate	77	72
LCS 880-51651/2-A	Lab Control Sample	95	91

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Surrogate Summary

Client: Ensolum

Job ID: 890-4537-1

Project/Site: Wilder 28 Federal 001H

SDG: 03D2024173

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
LCS 880-51720/2-A	Lab Control Sample	98	93
LCS 880-52125/2-A	Lab Control Sample	71	70
LCSD 880-51651/3-A	Lab Control Sample Dup	95	89
LCSD 880-51720/3-A	Lab Control Sample Dup	103	95
LCSD 880-52125/3-A	Lab Control Sample Dup	69 S1-	67 S1-
MB 880-51651/1-A	Method Blank	136 S1+	141 S1+
MB 880-51720/1-A	Method Blank	120	124
MB 880-52125/1-A	Method Blank	119	121

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-51535/5-A

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51535

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 10:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 10:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 10:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/19/23 16:34	04/20/23 10:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/23 16:34	04/20/23 10:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/19/23 16:34	04/20/23 10:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	04/19/23 16:34	04/20/23 10:55	1
1,4-Difluorobenzene (Surr)	84		70 - 130	04/19/23 16:34	04/20/23 10:55	1

Lab Sample ID: LCS 880-51535/1-A

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1113		mg/Kg		111	70 - 130
Toluene	0.100	0.1075		mg/Kg		108	70 - 130
Ethylbenzene	0.100	0.1204		mg/Kg		120	70 - 130
m-Xylene & p-Xylene	0.200	0.2520		mg/Kg		126	70 - 130
o-Xylene	0.100	0.1235		mg/Kg		123	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-51535/2-A

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51535

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1086		mg/Kg		109	70 - 130	2	35
Toluene	0.100	0.1084		mg/Kg		108	70 - 130	1	35
Ethylbenzene	0.100	0.1206		mg/Kg		121	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.2516		mg/Kg		126	70 - 130	0	35
o-Xylene	0.100	0.1235		mg/Kg		123	70 - 130	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: MB 880-51615/5-A

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51615

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 22:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 22:04	1

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

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

Lab Sample ID: MB 880-51615/5-A

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51615

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 22:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/20/23 11:43	04/20/23 22:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/20/23 11:43	04/20/23 22:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/20/23 11:43	04/20/23 22:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	04/20/23 11:43	04/20/23 22:04	1
1,4-Difluorobenzene (Surr)	86		70 - 130	04/20/23 11:43	04/20/23 22:04	1

Lab Sample ID: LCS 880-51615/1-A

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51615

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1070		mg/Kg		107	70 - 130
Toluene	0.100	0.1026		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1122		mg/Kg		112	70 - 130
m-Xylene & p-Xylene	0.200	0.2307		mg/Kg		115	70 - 130
o-Xylene	0.100	0.1157		mg/Kg		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-51615/2-A

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51615

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1127		mg/Kg		113	70 - 130	5	35
Toluene	0.100	0.1085		mg/Kg		109	70 - 130	6	35
Ethylbenzene	0.100	0.1176		mg/Kg		118	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.2408		mg/Kg		120	70 - 130	4	35
o-Xylene	0.100	0.1210		mg/Kg		121	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 890-4537-6 MS

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: FS11

Prep Type: Total/NA

Prep Batch: 51615

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0990	0.1042		mg/Kg		105	70 - 130
Toluene	<0.00201	U	0.0990	0.09878		mg/Kg		99	70 - 130
Ethylbenzene	<0.00201	U	0.0990	0.1044		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.198	0.2124		mg/Kg		107	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

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

Lab Sample ID: 890-4537-6 MS

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: FS11

Prep Type: Total/NA

Prep Batch: 51615

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	<0.00201	U	0.0990	0.1060		mg/Kg		107	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 890-4537-6 MSD

Matrix: Solid

Analysis Batch: 51576

Client Sample ID: FS11

Prep Type: Total/NA

Prep Batch: 51615

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00201	U	0.101	0.1061		mg/Kg		105	70 - 130	2	35
Toluene	<0.00201	U	0.101	0.09550		mg/Kg		94	70 - 130	3	35
Ethylbenzene	<0.00201	U	0.101	0.09789		mg/Kg		97	70 - 130	6	35
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1970		mg/Kg		98	70 - 130	8	35
o-Xylene	<0.00201	U	0.101	0.09875		mg/Kg		98	70 - 130	7	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

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

Lab Sample ID: MB 880-51651/1-A

Matrix: Solid

Analysis Batch: 51659

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51651

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		04/20/23 16:48	04/21/23 08:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/20/23 16:48	04/21/23 08:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/23 16:48	04/21/23 08:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130	04/20/23 16:48	04/21/23 08:19	1
o-Terphenyl	141	S1+	70 - 130	04/20/23 16:48	04/21/23 08:19	1

Lab Sample ID: LCS 880-51651/2-A

Matrix: Solid

Analysis Batch: 51659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51651

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	850.1		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	1000	835.0		mg/Kg		83	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

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

Lab Sample ID: LCS 880-51651/2-A

Matrix: Solid

Analysis Batch: 51659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51651

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

Lab Sample ID: LCSD 880-51651/3-A

Matrix: Solid

Analysis Batch: 51659

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51651

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	843.5		mg/Kg		84	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	805.6		mg/Kg		81	70 - 130	4	20
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier									
1-Chlorooctane	95										
o-Terphenyl	89										

Lab Sample ID: 880-27391-A-1-C MS

Matrix: Solid

Analysis Batch: 51659

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 51651

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	996.3		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1067		mg/Kg		104	70 - 130		
Surrogate	MS	MS									
	%Recovery	Qualifier									
1-Chlorooctane	120										
o-Terphenyl	106										

Lab Sample ID: 880-27391-A-1-D MSD

Matrix: Solid

Analysis Batch: 51659

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 51651

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1072		mg/Kg		105	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1008		mg/Kg		99	70 - 130	6	20
Surrogate	MSD	MSD									
	%Recovery	Qualifier									
1-Chlorooctane	115										
o-Terphenyl	101										

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

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

Lab Sample ID: MB 880-51720/1-A

Matrix: Solid

Analysis Batch: 51776

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51720

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		04/21/23 14:02	04/22/23 20:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/22/23 20:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/21/23 14:02	04/22/23 20:18	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130			04/21/23 14:02	04/22/23 20:18	1
o-Terphenyl	124		70 - 130			04/21/23 14:02	04/22/23 20:18	1

Lab Sample ID: LCS 880-51720/2-A

Matrix: Solid

Analysis Batch: 51776

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	814.8		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)	1000	816.5		mg/Kg		82	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	98		70 - 130				
o-Terphenyl	93		70 - 130				

Lab Sample ID: LCSD 880-51720/3-A

Matrix: Solid

Analysis Batch: 51776

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51720

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	842.4		mg/Kg		84	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	940.6		mg/Kg		94	70 - 130	14	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	103		70 - 130						
o-Terphenyl	95		70 - 130						

Lab Sample ID: 880-27467-A-1-F MS

Matrix: Solid

Analysis Batch: 51776

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 51720

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	920.2		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	74.0		997	899.9		mg/Kg		83	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

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

Lab Sample ID: 880-27467-A-1-F MS

Matrix: Solid

Analysis Batch: 51776

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 51720

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 880-27467-A-1-G MSD

Matrix: Solid

Analysis Batch: 51776

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 51720

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	848.7		mg/Kg		83	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	74.0		998	952.4		mg/Kg		88	70 - 130	6	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: MB 880-52125/1-A

Matrix: Solid

Analysis Batch: 52069

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 52125

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		04/27/23 08:41	04/27/23 09:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/27/23 08:41	04/27/23 09:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/27/23 08:41	04/27/23 09:42	1

	MB	MB		Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits			
1-Chlorooctane	119		70 - 130	04/27/23 08:41	04/27/23 09:42	1
o-Terphenyl	121		70 - 130	04/27/23 08:41	04/27/23 09:42	1

Lab Sample ID: LCS 880-52125/2-A

Matrix: Solid

Analysis Batch: 52069

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 52125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	802.2		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	1000	742.3		mg/Kg		74	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	71		70 - 130
o-Terphenyl	70		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

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

Lab Sample ID: LCSD 880-52125/3-A

Matrix: Solid

Analysis Batch: 52069

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 52125

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	841.3		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	777.0		mg/Kg		78	70 - 130	5	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	69	S1-	70 - 130						
o-Terphenyl	67	S1-	70 - 130						

Lab Sample ID: 890-4577-A-13-C MS

Matrix: Solid

Analysis Batch: 52069

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 52125

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	987.8		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	997	665.2	F1	mg/Kg		64	70 - 130		
Surrogate	%Recovery	MS Qualifier	Limits								
1-Chlorooctane	76		70 - 130								
o-Terphenyl	71		70 - 130								

Lab Sample ID: 890-4577-A-13-D MSD

Matrix: Solid

Analysis Batch: 52069

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 52125

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	997.0		mg/Kg		100	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	997	683.7	F1	mg/Kg		66	70 - 130	3	20
Surrogate	%Recovery	MSD Qualifier	Limits								
1-Chlorooctane	77		70 - 130								
o-Terphenyl	72		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-51899/1-A

Matrix: Solid

Analysis Batch: 51979

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			04/25/23 13:38	1

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-51899/2-A

Matrix: Solid

Analysis Batch: 51979

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	242.8		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-51899/3-A

Matrix: Solid

Analysis Batch: 51979

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	239.6		mg/Kg		96	90 - 110	1	20

Lab Sample ID: 880-27360-A-11-D MS

Matrix: Solid

Analysis Batch: 51979

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	89.7	F1	250	307.3	F1	mg/Kg		87	90 - 110

Lab Sample ID: 880-27360-A-11-E MSD

Matrix: Solid

Analysis Batch: 51979

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	89.7	F1	250	303.3	F1	mg/Kg		85	90 - 110	1	20

Lab Sample ID: MB 880-51898/1-A

Matrix: Solid

Analysis Batch: 52036

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			04/25/23 23:10	1

Lab Sample ID: LCS 880-51898/2-A

Matrix: Solid

Analysis Batch: 52036

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	248.8		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-51898/3-A

Matrix: Solid

Analysis Batch: 52036

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	244.7		mg/Kg		98	90 - 110	2	20

Lab Sample ID: 890-4537-1 MS

Matrix: Solid

Analysis Batch: 52036

Client Sample ID: FS06

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	360		252	598.5		mg/Kg		95	90 - 110

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-4537-1 MSD								Client Sample ID: FS06			
Matrix: Solid								Prep Type: Soluble			
Analysis Batch: 52036											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	360		252	593.2		mg/Kg		93	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

GC VOA

Prep Batch: 51535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Total/NA	Solid	5035	
890-4537-2	FS07	Total/NA	Solid	5035	
890-4537-3	FS08	Total/NA	Solid	5035	
890-4537-4	FS09	Total/NA	Solid	5035	
890-4537-5	FS10	Total/NA	Solid	5035	
MB 880-51535/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-51535/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-51535/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 51576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Total/NA	Solid	8021B	51535
890-4537-2	FS07	Total/NA	Solid	8021B	51535
890-4537-3	FS08	Total/NA	Solid	8021B	51535
890-4537-4	FS09	Total/NA	Solid	8021B	51535
890-4537-5	FS10	Total/NA	Solid	8021B	51535
890-4537-6	FS11	Total/NA	Solid	8021B	51615
890-4537-7	FS12	Total/NA	Solid	8021B	51615
890-4537-8	FS13	Total/NA	Solid	8021B	51615
890-4537-9	FS14	Total/NA	Solid	8021B	51615
890-4537-10	FS15	Total/NA	Solid	8021B	51615
890-4537-11	FS16	Total/NA	Solid	8021B	51615
890-4537-12	FS17	Total/NA	Solid	8021B	51615
MB 880-51535/5-A	Method Blank	Total/NA	Solid	8021B	51535
MB 880-51615/5-A	Method Blank	Total/NA	Solid	8021B	51615
LCS 880-51535/1-A	Lab Control Sample	Total/NA	Solid	8021B	51535
LCS 880-51615/1-A	Lab Control Sample	Total/NA	Solid	8021B	51615
LCSD 880-51535/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	51535
LCSD 880-51615/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	51615
890-4537-6 MS	FS11	Total/NA	Solid	8021B	51615
890-4537-6 MSD	FS11	Total/NA	Solid	8021B	51615

Prep Batch: 51615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-6	FS11	Total/NA	Solid	5035	
890-4537-7	FS12	Total/NA	Solid	5035	
890-4537-8	FS13	Total/NA	Solid	5035	
890-4537-9	FS14	Total/NA	Solid	5035	
890-4537-10	FS15	Total/NA	Solid	5035	
890-4537-11	FS16	Total/NA	Solid	5035	
890-4537-12	FS17	Total/NA	Solid	5035	
MB 880-51615/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-51615/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-51615/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4537-6 MS	FS11	Total/NA	Solid	5035	
890-4537-6 MSD	FS11	Total/NA	Solid	5035	

Analysis Batch: 51722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Total/NA	Solid	Total BTEX	
890-4537-2	FS07	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

GC VOA (Continued)

Analysis Batch: 51722 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-3	FS08	Total/NA	Solid	Total BTEX	
890-4537-4	FS09	Total/NA	Solid	Total BTEX	
890-4537-5	FS10	Total/NA	Solid	Total BTEX	
890-4537-6	FS11	Total/NA	Solid	Total BTEX	
890-4537-7	FS12	Total/NA	Solid	Total BTEX	
890-4537-8	FS13	Total/NA	Solid	Total BTEX	
890-4537-9	FS14	Total/NA	Solid	Total BTEX	
890-4537-10	FS15	Total/NA	Solid	Total BTEX	
890-4537-11	FS16	Total/NA	Solid	Total BTEX	
890-4537-12	FS17	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 51651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-2	FS07	Total/NA	Solid	8015NM Prep	
890-4537-4	FS09	Total/NA	Solid	8015NM Prep	
890-4537-5	FS10	Total/NA	Solid	8015NM Prep	
890-4537-6	FS11	Total/NA	Solid	8015NM Prep	
890-4537-7	FS12	Total/NA	Solid	8015NM Prep	
MB 880-51651/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-51651/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-51651/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-27391-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-27391-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 51659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-2	FS07	Total/NA	Solid	8015B NM	51651
890-4537-4	FS09	Total/NA	Solid	8015B NM	51651
890-4537-5	FS10	Total/NA	Solid	8015B NM	51651
890-4537-6	FS11	Total/NA	Solid	8015B NM	51651
890-4537-7	FS12	Total/NA	Solid	8015B NM	51651
MB 880-51651/1-A	Method Blank	Total/NA	Solid	8015B NM	51651
LCS 880-51651/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	51651
LCSD 880-51651/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	51651
880-27391-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	51651
880-27391-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	51651

Prep Batch: 51720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-8	FS13	Total/NA	Solid	8015NM Prep	
890-4537-9	FS14	Total/NA	Solid	8015NM Prep	
890-4537-10	FS15	Total/NA	Solid	8015NM Prep	
890-4537-11	FS16	Total/NA	Solid	8015NM Prep	
890-4537-12	FS17	Total/NA	Solid	8015NM Prep	
MB 880-51720/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-51720/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-51720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-27467-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-27467-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

GC Semi VOA

Analysis Batch: 51764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Total/NA	Solid	8015 NM	
890-4537-2	FS07	Total/NA	Solid	8015 NM	
890-4537-3	FS08	Total/NA	Solid	8015 NM	
890-4537-4	FS09	Total/NA	Solid	8015 NM	
890-4537-5	FS10	Total/NA	Solid	8015 NM	
890-4537-6	FS11	Total/NA	Solid	8015 NM	
890-4537-7	FS12	Total/NA	Solid	8015 NM	
890-4537-8	FS13	Total/NA	Solid	8015 NM	
890-4537-9	FS14	Total/NA	Solid	8015 NM	
890-4537-10	FS15	Total/NA	Solid	8015 NM	
890-4537-11	FS16	Total/NA	Solid	8015 NM	
890-4537-12	FS17	Total/NA	Solid	8015 NM	

Analysis Batch: 51776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-8	FS13	Total/NA	Solid	8015B NM	51720
890-4537-9	FS14	Total/NA	Solid	8015B NM	51720
890-4537-10	FS15	Total/NA	Solid	8015B NM	51720
890-4537-11	FS16	Total/NA	Solid	8015B NM	51720
890-4537-12	FS17	Total/NA	Solid	8015B NM	51720
MB 880-51720/1-A	Method Blank	Total/NA	Solid	8015B NM	51720
LCS 880-51720/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	51720
LCSD 880-51720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	51720
880-27467-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	51720
880-27467-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	51720

Analysis Batch: 52069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Total/NA	Solid	8015B NM	52125
890-4537-3	FS08	Total/NA	Solid	8015B NM	52125
MB 880-52125/1-A	Method Blank	Total/NA	Solid	8015B NM	52125
LCS 880-52125/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	52125
LCSD 880-52125/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	52125
890-4577-A-13-C MS	Matrix Spike	Total/NA	Solid	8015B NM	52125
890-4577-A-13-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	52125

Prep Batch: 52125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Total/NA	Solid	8015NM Prep	
890-4537-3	FS08	Total/NA	Solid	8015NM Prep	
MB 880-52125/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-52125/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-52125/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4577-A-13-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4577-A-13-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 51898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

HPLC/IC (Continued)

Leach Batch: 51898 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-2	FS07	Soluble	Solid	DI Leach	
890-4537-3	FS08	Soluble	Solid	DI Leach	
890-4537-4	FS09	Soluble	Solid	DI Leach	
890-4537-5	FS10	Soluble	Solid	DI Leach	
890-4537-6	FS11	Soluble	Solid	DI Leach	
890-4537-7	FS12	Soluble	Solid	DI Leach	
890-4537-8	FS13	Soluble	Solid	DI Leach	
890-4537-9	FS14	Soluble	Solid	DI Leach	
890-4537-10	FS15	Soluble	Solid	DI Leach	
MB 880-51898/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-51898/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-51898/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4537-1 MS	FS06	Soluble	Solid	DI Leach	
890-4537-1 MSD	FS06	Soluble	Solid	DI Leach	

Leach Batch: 51899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-11	FS16	Soluble	Solid	DI Leach	
890-4537-12	FS17	Soluble	Solid	DI Leach	
MB 880-51899/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-51899/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-51899/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-27360-A-11-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-27360-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 51979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-11	FS16	Soluble	Solid	300.0	51899
890-4537-12	FS17	Soluble	Solid	300.0	51899
MB 880-51899/1-A	Method Blank	Soluble	Solid	300.0	51899
LCS 880-51899/2-A	Lab Control Sample	Soluble	Solid	300.0	51899
LCSD 880-51899/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	51899
880-27360-A-11-D MS	Matrix Spike	Soluble	Solid	300.0	51899
880-27360-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	51899

Analysis Batch: 52036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1	FS06	Soluble	Solid	300.0	51898
890-4537-2	FS07	Soluble	Solid	300.0	51898
890-4537-3	FS08	Soluble	Solid	300.0	51898
890-4537-4	FS09	Soluble	Solid	300.0	51898
890-4537-5	FS10	Soluble	Solid	300.0	51898
890-4537-6	FS11	Soluble	Solid	300.0	51898
890-4537-7	FS12	Soluble	Solid	300.0	51898
890-4537-8	FS13	Soluble	Solid	300.0	51898
890-4537-9	FS14	Soluble	Solid	300.0	51898
890-4537-10	FS15	Soluble	Solid	300.0	51898
MB 880-51898/1-A	Method Blank	Soluble	Solid	300.0	51898
LCS 880-51898/2-A	Lab Control Sample	Soluble	Solid	300.0	51898
LCSD 880-51898/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	51898
890-4537-1 MS	FS06	Soluble	Solid	300.0	51898

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

HPLC/IC (Continued)

Analysis Batch: 52036 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4537-1 MSD	FS06	Soluble	Solid	300.0	51898

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS06**Lab Sample ID: 890-4537-1****Date Collected: 04/18/23 09:00****Matrix: Solid****Date Received: 04/18/23 15:33**

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	51535	04/19/23 16:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 17:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/21/23 17:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52125	04/27/23 13:41	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52069	04/27/23 19:22	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 00:28	SMC	EET MID

Client Sample ID: FS07**Lab Sample ID: 890-4537-2****Date Collected: 04/18/23 09:35****Matrix: Solid****Date Received: 04/18/23 15:33**

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	51535	04/19/23 16:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 18:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 10:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	51651	04/20/23 16:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51659	04/21/23 16:55	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 00:41	SMC	EET MID

Client Sample ID: FS08**Lab Sample ID: 890-4537-3****Date Collected: 04/18/23 09:40****Matrix: Solid****Date Received: 04/18/23 15:33**

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	51535	04/19/23 16:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 18:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 10:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	52125	04/27/23 13:41	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52069	04/27/23 19:43	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 00:46	SMC	EET MID

Client Sample ID: FS09**Lab Sample ID: 890-4537-4****Date Collected: 04/18/23 10:20****Matrix: Solid****Date Received: 04/18/23 15:33**

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	51535	04/19/23 16:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 18:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS09

Date Collected: 04/18/23 10:20

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-4

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			51764	04/24/23 10:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	51651	04/20/23 16:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51659	04/21/23 17:39	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 15:09	SMC	EET MID

Client Sample ID: FS10

Date Collected: 04/18/23 10:25

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	51535	04/19/23 16:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 19:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 10:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	51651	04/20/23 16:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51659	04/21/23 18:01	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 01:04	SMC	EET MID

Client Sample ID: FS11

Date Collected: 04/18/23 11:00

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-6

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			4.97 g	5 mL	51615	04/20/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 22:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 10:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51651	04/20/23 16:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51659	04/21/23 18:23	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 01:09	SMC	EET MID

Client Sample ID: FS12

Date Collected: 04/18/23 11:05

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	51615	04/20/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 22:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 10:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	51651	04/20/23 16:48	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51659	04/21/23 18:45	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS12

Date Collected: 04/18/23 11:05

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 01:13	SMC	EET MID

Client Sample ID: FS13

Date Collected: 04/18/23 11:20

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	51615	04/20/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 23:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 11:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	51720	04/21/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51776	04/23/23 03:38	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 01:18	SMC	EET MID

Client Sample ID: FS14

Date Collected: 04/18/23 11:25

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	51615	04/20/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 23:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 11:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51720	04/21/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51776	04/23/23 03:59	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 01:22	SMC	EET MID

Client Sample ID: FS15

Date Collected: 04/18/23 12:30

Date Received: 04/18/23 15:33

Lab Sample ID: 890-4537-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	51615	04/20/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/20/23 23:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 11:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	51720	04/21/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51776	04/23/23 04:20	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	51898	04/25/23 07:33	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52036	04/26/23 01:27	SMC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Client Sample ID: FS16

Lab Sample ID: 890-4537-11

Date Collected: 04/18/23 12:35

Matrix: Solid

Date Received: 04/18/23 15:33

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	51615	04/20/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/21/23 00:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 11:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51720	04/21/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51776	04/23/23 04:41	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	51899	04/25/23 07:35	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51979	04/25/23 15:14	SMC	EET MID

Client Sample ID: FS17

Lab Sample ID: 890-4537-12

Date Collected: 04/18/23 12:40

Matrix: Solid

Date Received: 04/18/23 15:33

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	51615	04/20/23 11:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51576	04/21/23 00:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51722	04/21/23 14:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			51764	04/24/23 11:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	51720	04/21/23 14:02	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51776	04/23/23 05:01	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	51899	04/25/23 07:35	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	51979	04/25/23 15:27	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Wilder 28 Federal 001H

Job ID: 890-4537-1
SDG: 03D2024173

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4537-1	FS06	Solid	04/18/23 09:00	04/18/23 15:33	1.5'
890-4537-2	FS07	Solid	04/18/23 09:35	04/18/23 15:33	1.5'
890-4537-3	FS08	Solid	04/18/23 09:40	04/18/23 15:33	1.5'
890-4537-4	FS09	Solid	04/18/23 10:20	04/18/23 15:33	1.5'
890-4537-5	FS10	Solid	04/18/23 10:25	04/18/23 15:33	1.5'
890-4537-6	FS11	Solid	04/18/23 11:00	04/18/23 15:33	1.5'
890-4537-7	FS12	Solid	04/18/23 11:05	04/18/23 15:33	1.5'
890-4537-8	FS13	Solid	04/18/23 11:20	04/18/23 15:33	1.5'
890-4537-9	FS14	Solid	04/18/23 11:25	04/18/23 15:33	1.5'
890-4537-10	FS15	Solid	04/18/23 12:30	04/18/23 15:33	1.5'
890-4537-11	FS16	Solid	04/18/23 12:35	04/18/23 15:33	1.5'
890-4537-12	FS17	Solid	04/18/23 12:40	04/18/23 15:33	1.5'



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 2

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

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project: Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/> Deliverables: EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other:	

Project Name:		Turn Around		ANALYSIS REQUEST										Preservative Codes								
Project Number:		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush		Pres. Code												None: NO DI Water: H ₂ O						
Project Location:		Due Date:		Parameters		 890-4537 Chain of Custody										Cool: Cool MeOH: Me						
Sampler's Name:		TAT starts the day received by the lab, if received by 4:30pm														HCL: HC HNO ₃ : HN						
PO #:																H ₂ SO ₄ : H ₂ NaOH: Na						
SAMPLE RECEIPT		Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wet Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No														H ₃ PO ₄ : HP						
Samples Received Intact:		Thermometer ID:														NaHSO ₄ : NABIS						
Cooler Custody Seals:		Correction Factor:														Na ₂ S ₂ O ₃ : NaSO ₃						
Sample Custody Seals:		Temperature Reading:														Zn Acetate+NaOH: Zn						
Total Containers:		Corrected Temperature:														NaOH+Ascorbic Acid: SAPC						
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8016)	BTEX (8021)											Sample Comments	
FS06		Soil	4/18/2023	900	1.5'	Comp	1	x	x	x												
FS07		Soil	4/18/2023	935	1.5'	Comp	1	x	x	x												
FS08		Soil	4/18/2023	940	1.5'	Comp	1	x	x	x												
FS09		Soil	4/18/2023	1020	1.5'	Comp	1	x	x	x												
FS10		Soil	4/18/2023	1025	1.5'	Comp	1	x	x	x												
FS11		Soil	4/18/2023	1100	1.5'	Comp	1	x	x	x												
FS12		Soil	4/18/2023	1105	1.5'	Comp	1	x	x	x												
FS13		Soil	4/18/2023	1120	1.5'	Comp	1	x	x	x												
FS14		Soil	4/18/2023	1125	1.5'	Comp	1	x	x	x												
FS15		Soil	4/18/2023	1230	1.5'	Comp	1	x	x	x												

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti 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 Ti 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 <i>Peter Van Patten</i>	<i>Aurelia Isuf</i>	4/18/23 1:53	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4537-1

SDG Number: 03D2024173

Login Number: 4537

List Number: 1

Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4537-1

SDG Number: 03D2024173

Login Number: 4537

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 04/20/23 10:47 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	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 5/11/2023 8:33:30 AM

JOB DESCRIPTION

Wilder 28-1
SDG NUMBER 03D2024173

JOB NUMBER

890-4625-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
5/11/2023 8:33:30 AM

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

Client: Ensolum
Project/Site: Wilder 28-1

Laboratory Job ID: 890-4625-1
SDG: 03D2024173

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Definitions/Glossary

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

Job ID: 890-4625-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-4625-1****Receipt**

The sample was received on 5/4/2023 1:26 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

Receipt Exceptions

The following sample was received and analyzed from an unpreserved bulk soil jar: FS06A (890-4625-1).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-52798 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-52691 and analytical batch 880-52798 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-4620-A-1-A MS) and (890-4620-A-1-B 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: (890-4620-A-1-C). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53015 and analytical batch 880-52997 was outside the upper control limits.

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

HPLC/IC

Method 300_ORGFM_28D: The method blank associated with preparation batch 880-52848 and 880-52848 and analytical batch 880-53032 contained Chloride greater than one-half the reporting limit (RL). The samples were not re-analyzed because all samples were greater than 10 times the detection of the Method Blank (MB). The sample results have been qualified and reported.FS06A (890-4625-1), (MB 880-52848/1-A) and (880-27940-A-81-D)

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-52848 and analytical batch 880-53032 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

Client Sample ID: FS06A

Lab Sample ID: 890-4625-1

Date Collected: 05/04/23 09:00

Matrix: Solid

Date Received: 05/04/23 13:26

Sample Depth: 1.75'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U **	0.00200	mg/Kg		05/05/23 10:40	05/09/23 06:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/05/23 10:40	05/09/23 06:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/05/23 10:40	05/09/23 06:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/05/23 10:40	05/09/23 06:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/05/23 10:40	05/09/23 06:40	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/05/23 10:40	05/09/23 06:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130	05/05/23 10:40	05/09/23 06:40	1
1,4-Difluorobenzene (Surr)	84		70 - 130	05/05/23 10:40	05/09/23 06:40	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/09/23 13:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	92.8		49.9	mg/Kg			05/10/23 19:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/10/23 10:09	05/10/23 18:05	1
Diesel Range Organics (Over C10-C28)	92.8		49.9	mg/Kg		05/10/23 10:09	05/10/23 18:05	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/10/23 10:09	05/10/23 18:05	1
Total TPH	92.8		49.9	mg/Kg		05/10/23 10:09	05/10/23 18:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	05/10/23 10:09	05/10/23 18:05	1
o-Terphenyl	86		70 - 130	05/10/23 10:09	05/10/23 18:05	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	355	B	4.98	mg/Kg			05/09/23 18:01	1

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Surrogate Summary

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

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)
890-4620-A-1-A MS	Matrix Spike	430 S1+	26 S1-
890-4620-A-1-B MSD	Matrix Spike Duplicate	483 S1+	43 S1-
890-4625-1	FS06A	122	84
LCS 880-52691/1-A	Lab Control Sample	114	89
LCSD 880-52691/2-A	Lab Control Sample Dup	121	111
MB 880-52691/5-A	Method Blank	97	94
MB 880-52803/5-A	Method Blank	105	94
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)
890-4625-1	FS06A	115	86
890-4629-A-1-E MS	Matrix Spike	107	77
890-4629-A-1-F MSD	Matrix Spike Duplicate	101	74
LCS 880-53015/2-A	Lab Control Sample	106	82
LCSD 880-53015/3-A	Lab Control Sample Dup	119	91
MB 880-53015/1-A	Method Blank	137 S1+	110
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-52691/5-A

Matrix: Solid

Analysis Batch: 52798

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 52691

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/05/23 10:40	05/08/23 23:15	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/05/23 10:40	05/08/23 23:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/05/23 10:40	05/08/23 23:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/05/23 10:40	05/08/23 23:15	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/05/23 10:40	05/08/23 23:15	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/05/23 10:40	05/08/23 23:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	05/05/23 10:40	05/08/23 23:15	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/05/23 10:40	05/08/23 23:15	1

Lab Sample ID: LCS 880-52691/1-A

Matrix: Solid

Analysis Batch: 52798

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 52691

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1124		mg/Kg		112	70 - 130
Toluene	0.100	0.1066		mg/Kg		107	70 - 130
Ethylbenzene	0.100	0.09678		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.2223		mg/Kg		111	70 - 130
o-Xylene	0.100	0.1083		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: LCSD 880-52691/2-A

Matrix: Solid

Analysis Batch: 52798

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 52691

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1485	*+	mg/Kg		148	70 - 130	28	35
Toluene	0.100	0.1132		mg/Kg		113	70 - 130	6	35
Ethylbenzene	0.100	0.1042		mg/Kg		104	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.2508		mg/Kg		125	70 - 130	12	35
o-Xylene	0.100	0.1233		mg/Kg		123	70 - 130	13	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Lab Sample ID: 890-4620-A-1-A MS

Matrix: Solid

Analysis Batch: 52798

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 52691

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.00606	F1 *+	0.0998	0.03220	F1	mg/Kg		26	70 - 130
Ethylbenzene	<0.00198	U F1	0.0998	0.3546	F1	mg/Kg		354	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

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

Lab Sample ID: 890-4620-A-1-A MS

Matrix: Solid

Analysis Batch: 52798

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 52691

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
m-Xylene & p-Xylene	0.0219	F1 F2	0.200	0.2767		mg/Kg		128	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	430	S1+	70 - 130
1,4-Difluorobenzene (Surr)	26	S1-	70 - 130

Lab Sample ID: 890-4620-A-1-B MSD

Matrix: Solid

Analysis Batch: 52798

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 52691

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.00606	F1 *+	0.100	0.04277	F1	mg/Kg		37	70 - 130	28	35
m-Xylene & p-Xylene	0.0219	F1 F2	0.200	0.5083	F1 F2	mg/Kg		243	70 - 130	59	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	483	S1+	70 - 130
1,4-Difluorobenzene (Surr)	43	S1-	70 - 130

Lab Sample ID: MB 880-52803/5-A

Matrix: Solid

Analysis Batch: 52798

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 52803

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/08/23 09:13	05/08/23 11:38	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/08/23 09:13	05/08/23 11:38	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	05/08/23 09:13	05/08/23 11:38	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/08/23 09:13	05/08/23 11:38	1

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

Lab Sample ID: MB 880-53015/1-A

Matrix: Solid

Analysis Batch: 52997

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53015

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/10/23 08:09	05/10/23 09:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/10/23 08:09	05/10/23 09:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/10/23 08:09	05/10/23 09:04	1
Total TPH	<50.0	U	50.0	mg/Kg		05/10/23 08:09	05/10/23 09:04	1

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

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

Lab Sample ID: MB 880-53015/1-A

Matrix: Solid

Analysis Batch: 52997

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53015

	MB	MB								
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac			
1-Chlorooctane	137	S1+	70 - 130	05/10/23 08:09	05/10/23 09:04	1				
o-Terphenyl	110		70 - 130	05/10/23 08:09	05/10/23 09:04	1				

Lab Sample ID: LCS 880-53015/2-A

Matrix: Solid

Analysis Batch: 52997

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53015

			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	982.4		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130		

	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	106		70 - 130								
o-Terphenyl	82		70 - 130								

Lab Sample ID: LCSD 880-53015/3-A

Matrix: Solid

Analysis Batch: 52997

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 53015

			Spike	LCSD	LCSD				%Rec		RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10			1000	1012		mg/Kg		101	70 - 130	3	20	
Diesel Range Organics (Over C10-C28)			1000	1085		mg/Kg		109	70 - 130	5	20	

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

Lab Sample ID: 890-4629-A-1-E MS

Matrix: Solid

Analysis Batch: 52997

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 53015

	Sample	Sample	Spike	MS	MS				%Rec			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	870.1		mg/Kg		87	70 - 130			
Diesel Range Organics (Over C10-C28)	<49.9	U	996	780.5		mg/Kg		76	70 - 130			

	MS	MS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	107		70 - 130									
o-Terphenyl	77		70 - 130									

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QC Sample Results

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

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

Lab Sample ID: 890-4629-A-1-F MSD

Matrix: Solid

Analysis Batch: 52997

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 53015

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	996	830.0		mg/Kg		83	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	745.3		mg/Kg		72	70 - 130	5	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	101		70 - 130								
o-Terphenyl	74		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-52848/1-A

Matrix: Solid

Analysis Batch: 53032

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.955		5.00	mg/Kg			05/09/23 15:59	1

Lab Sample ID: LCS 880-52848/2-A

Matrix: Solid

Analysis Batch: 53032

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	254.9		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-52848/3-A

Matrix: Solid

Analysis Batch: 53032

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	270.6		mg/Kg		108	90 - 110	6	20

Lab Sample ID: 880-27940-A-81-E MS

Matrix: Solid

Analysis Batch: 53032

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	259	B	251	495.8		mg/Kg		94	90 - 110

Lab Sample ID: 880-27940-A-81-F MSD

Matrix: Solid

Analysis Batch: 53032

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	259	B	251	508.9		mg/Kg		100	90 - 110	3	20

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

GC VOA

Prep Batch: 52691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Total/NA	Solid	5035	
MB 880-52691/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-52691/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-52691/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4620-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-4620-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 52798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Total/NA	Solid	8021B	52691
MB 880-52691/5-A	Method Blank	Total/NA	Solid	8021B	52691
MB 880-52803/5-A	Method Blank	Total/NA	Solid	8021B	52803
LCS 880-52691/1-A	Lab Control Sample	Total/NA	Solid	8021B	52691
LCSD 880-52691/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	52691
890-4620-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	52691
890-4620-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	52691

Prep Batch: 52803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-52803/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 52950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 52997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Total/NA	Solid	8015B NM	53015
MB 880-53015/1-A	Method Blank	Total/NA	Solid	8015B NM	53015
LCS 880-53015/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53015
LCSD 880-53015/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53015
890-4629-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53015
890-4629-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53015

Prep Batch: 53015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Total/NA	Solid	8015NM Prep	
MB 880-53015/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53015/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53015/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4629-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4629-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

HPLC/IC

Leach Batch: 52848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Soluble	Solid	DI Leach	
MB 880-52848/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-52848/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-52848/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-27940-A-81-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-27940-A-81-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 53032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4625-1	FS06A	Soluble	Solid	300.0	52848
MB 880-52848/1-A	Method Blank	Soluble	Solid	300.0	52848
LCS 880-52848/2-A	Lab Control Sample	Soluble	Solid	300.0	52848
LCSD 880-52848/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	52848
880-27940-A-81-E MS	Matrix Spike	Soluble	Solid	300.0	52848
880-27940-A-81-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	52848

Lab Chronicle

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

Client Sample ID: FS06A
Date Collected: 05/04/23 09:00
Date Received: 05/04/23 13:26

Lab Sample ID: 890-4625-1
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	52691	05/05/23 10:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	52798	05/09/23 06:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			52950	05/09/23 13:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			53072	05/10/23 19:11	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53015	05/10/23 10:09	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	52997	05/10/23 18:05	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	52848	05/08/23 13:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	53032	05/09/23 18:01	SMC	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Wilder 28-1

Job ID: 890-4625-1
SDG: 03D2024173

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4625-1	FS06A	Solid	05/04/23 09:00	05/04/23 13:26	1.75'

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4625-1

SDG Number: 03D2024173

Login Number: 4625

List Number: 1

Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4625-1

SDG Number: 03D2024173

Login Number: 4625

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 05/05/23 10:46 AM

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



APPENDIX D

NMOCD Notifications

From: [Laird, Jacob](#)
To: [Kalei Jennings](#); [Hadlie Green](#)
Subject: FW: Extension Request - Wilder 28 Federal 001H (Incident Number NAPP2301736973)
Date: Tuesday, April 4, 2023 3:39:09 PM

[**EXTERNAL EMAIL**]

FYI

I appreciate you,

Jacob Laird | Environmental Engineer, DBE | **ConocoPhillips**
C: 575-703-5482

From: Laird, Jacob
Sent: Tuesday, April 4, 2023 2:39 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; CFO_Spill, BLM_NM <BLM_NM_CFO_Spill@blm.gov>
Cc: Esparza, Brittany <Brittany.Esparza@conocophillips.com>; Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>; Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Subject: Extension Request - Wilder 28 Federal 001H (Incident Number NAPP2301736973)

To Whom It May Concern,

Wilder 28 Federal 001H (Incident Number NAPP2301736973)

ConocoPhillips Company (COP) is requesting an extension for the current deadline of April 9, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Wilder 28 Federal 001H (Incident Number NAPP2301736973). The release was discovered on January 9, 2023 and initial site assessment activities have been completed. Based on field screening activities, excavation activities are warranted. Excavation activities are scheduled to begin the week of April 10, 2023. In order to complete additional remediation activities and submit a remediation work plan or closure report, COP requests a 90-day extension of this deadline until July 8, 2023.

Thank you,

Jacob Laird | Environmental Engineer, DBE | **ConocoPhillips**
C: 575-703-5482

From: [Laird, Jacob](#)
To: [Kalei Jennings](#); [Hadlie Green](#)
Cc: [Esparza, Brittany](#)
Subject: FW: [EXTERNAL] Extension Request - Wilder 28 Federal 001H (Incident Number NAPP2301736973)
Date: Wednesday, April 19, 2023 12:39:25 PM

[**EXTERNAL EMAIL **]

FYI

I appreciate you,

Jacob Laird | Environmental Engineer, DBE | **ConocoPhillips**
C: 575-703-5482

From: Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Sent: Wednesday, April 19, 2023 11:11 AM
To: Laird, Jacob <Jacob.Laird@conocophillips.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Subject: FW: [EXTERNAL] Extension Request - Wilder 28 Federal 001H (Incident Number NAPP2301736973)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Jacob

OCD approves your request for a 90-day extension to July 8, 2023 to submit a remediation plan or closure report. 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: Laird, Jacob <Jacob.Laird@conocophillips.com>
Sent: Tuesday, April 4, 2023 2:39 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; CFO_Spill, BLM_NM <BLM_NM_CFO_Spill@blm.gov>
Cc: Esparza, Brittany <Brittany.Esparza@conocophillips.com>; Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>; Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>

Subject: [EXTERNAL] Extension Request - Wilder 28 Federal 001H (Incident Number NAPP2301736973)

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

To Whom It May Concern,

Wilder 28 Federal 001H (Incident Number NAPP2301736973)

ConocoPhillips Company (COP) is requesting an extension for the current deadline of April 9, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for Wilder 28 Federal 001H (Incident Number NAPP2301736973). The release was discovered on January 9, 2023 and initial site assessment activities have been completed. Based on field screening activities, excavation activities are warranted. Excavation activities are scheduled to begin the week of April 10, 2023. In order to complete additional remediation activities and submit a remediation work plan or closure report, COP requests a 90-day extension of this deadline until July 8, 2023.

Thank you,

Jacob Laird | Environmental Engineer, DBE | **ConocoPhillips**
C: 575-703-5482

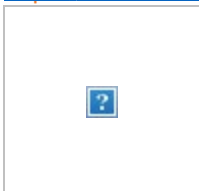
From: [Enviro, OCD, EMNRD](#)
To: [Hadlie Green](#)
Cc: [Bratcher, Michael, EMNRD](#); [Nobui, Jennifer, EMNRD](#)
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 4/17/2023)
Date: Friday, April 14, 2023 10:36:57 AM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[**EXTERNAL EMAIL**]

Hadlie,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file
JH

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



From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, April 13, 2023 8:51 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 4/17/2023)

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

All,

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

- Wilder 28-1 / NAPP2301736973
 - Sampling Date: 4/17-19/2023 @ 10:00 AM MST
- Bandit 15 Federal Com 002H / NAPP2307544597
 - Sampling Date: 4/21/2023 @ 10:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC



From: [Enviro, OCD, EMNRD](#)
To: [Hadlie Green](#)
Cc: [Bratcher, Michael, EMNRD](#); [Nobui, Jennifer, EMNRD](#)
Subject: RE: [EXTERNAL] Sampling Notification (Week of 3/20/2023)
Date: Wednesday, March 15, 2023 4:56:14 PM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

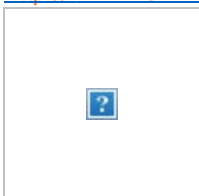
[**EXTERNAL EMAIL**]

Hadlie,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

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



From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, March 15, 2023 2:07 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>
Subject: [EXTERNAL] Sampling Notification (Week of 3/20/2023)

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

All,

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

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

Thank you,



Hadlie Green

Project Manager

432-557-8895

hgreen@ensolum.com

Ensolum, LLC





APPENDIX E

Final C-141

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
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)

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


Cause of Release

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> 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

<input type="checkbox"/> The source of the release has been stopped.	
<input type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u></u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: <u>Jocelyn Harimon</u>	Date: <u>01/17/2023</u>

Spill Calculation - Subsurface Spill - Rectangle										NAPP2301736973		Remediation Recommendation	
Received by OCD: 7/11/2023 9:31:12AM												Page 162 of 167	
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	On/Off Pad (dropdown)	Soil Spilled-Fluid Saturation (%)	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture (%)	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)	Total Estimated Contaminated Soil, uncompacted, 25% (yd³.)	Current Rule of Thumb - RMR Handover Volume, (yd³.)	
Rectangle A	66.0	53.0	0.3	Off-Pad ▾	13.69%	12.97	1.78	13%	0.23	1.55	3.37	750	
Rectangle B	140.0	4.0	2.0	Off-Pad ▾	13.69%	16.61	2.27		0.29	1.98	4.32		
Rectangle C	145.0	2.5	2.0	Off-Pad ▾	13.69%	10.75	1.47		0.19	1.28	2.80		
Rectangle D				▾		0.00					0.00		
Rectangle E				▾		0.00					0.00		
Rectangle F				▾		0.00					0.00		
Rectangle G				▾		0.00					0.00		
Rectangle H				▾		0.00					0.00		
Rectangle I				▾		0.00					0.00		
Released to Imaging: 10/2/2023 11:35:28AM				▾		0.00					0.00		
Total Subsurface Volume Released:							5.52		0.71	4.82	10.49	BU	

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

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

CONDITIONS

Action 176634

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 176634
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	1/17/2023

Incident ID	NAPP2301736973
District RP	
Facility ID	fAPP2129429037
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?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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

Page 4

Incident ID	NAPP2301736973
District RP	
Facility ID	fAPP2129429037
Application ID	

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

Printed Name: _Jacob Laird_____ Title: _Environmental Engineer_____

Signature: Jacob Laird_____ Date: _7/8/2023_____

email: _Jacob.Laird@Conocophillips.com_____ Telephone: __575-703-5482_____

OCD OnlyReceived by: Shelly Wells_____ Date: 7/11/2023_____

Incident ID	NAPP2301736973
District RP	
Facility ID	fAPP2129429037
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Jacob Laird Title: Environmental Engineer

Signature: *Jacob Laird* Date: 7/8/2023

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

OCD Only

Received by: Shelly Wells Date: 7/11/2023

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

Closure Approved by: *Nelson Velez* Date: 10/02/2023

Printed Name: Nelson Velez Title: Environmental Specialist - Adv

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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 238384

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 238384
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	10/2/2023