

July 19, 2022

District 1 New Mexico Oil Conservation Division 1625 North French Drive Hobbs, New Mexico 88240

Re: Closure Request

Columbus Federal 021H & 022H CTB Incident Number NAPP2203830124 Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this Closure Request to document site assessment, excavation, and soil sampling activities performed at the Columbus Federal 021H & 022H Centeral Tank Battery (CTB) (collectively referreed to as the Site). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a crude oil flare fire at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, COG is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2203830124.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 34, Township 25 South, Range 33 East, in Lea County, New Mexico (32.092222° N, 103.55556° W) and is associated with oil and gas exploration and production operations on Brown Sandra Rudy private land.

On January 22, 2022, approximately 1.6 barrels (bbls) of crude oil released out of a flare located at the Site. The released crude oil ignited and extinguished itself after reaching the ground. COG reported the release immediately via email to the New Mexico Oil Conservation Division (NMOCD) on January 23, 2022 and submitted a Release Notification Form C-141 (Form C-141) on February 7, 2022. The release was assigned Incident Number NAPP2203830124.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). 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-02313, located

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants
601 North Marienfeld Street | Midland, TX 79701 | ensolum.com
Texas PG Firm No. 50588 | Texas PE Firm No. F-21843



approximately 0.5 miles northeast of the Site. The groundwater well has a reported depth to groundwater of 110 feet bgs and a total depth of 150 feet bgs. Ground surface elevation at the groundwater well location is 3,323 feet above mean sea level (amsl), which is approximately 5 feet lower in elevation than the Site. There are no regional or Site-specific hydrological conditions, such as shallow surface water, karst features, wetlands, or vegetation that suggest the Site is conducive to shallow groundwater. 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 riverine, located approximately 2.8 miles southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On June 13, 2022, site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Eight preliminary assessment soil samples (SS01 through SS08) were collected within the release extent at a depth of 0.5 feet bgs, to assess the lateral extent of the release. The preliminary soil samples were field screened for volatile aromatic hydrocarbons utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil sample SS01, collected within the release extent, indicated TPH and TPH-GRO/TPH-DRO concentrations exceeded the Closure Criteria. Laboratory analytical results for preliminary soil samples SS02 through SS08, collected within the release extent, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with



the Closure Criteria. Based on visible staining in the release area near the flare stack, elevated field screening results, and laboratory analytical results for preliminary soil sample SS01, delineation and excavation activities appeared to be warranted.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On July 7, 2022, Ensolum personnel were at the Site to oversee delineation and excavation activities. Four potholes (PH01 through PH04) were advanced via backhoe within the release extent to assess the vertical extent of impacted soil. The potholes were advanced to a depth of 2 feet bgs in the vicinity of preliminary soil sample locations SS04, SS05, SS06, and SS08, respectively. Delineation soil samples (PH01/PH01A through PH04/PH04A) were collected from each pothole at depths of 1-foot and 2 feet bgs. Additionally, four lateral delineation soil samples (SS09 through SS12) were collected outside the release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release. Soil from all sample locations was field screened for volatile aromatic hydrocarbons and chloride. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix B. The delineation soil sample locations are depicted on Figure 3.

Upon completion of delineation activities, impacted soil was excavated from the release area as indicated by visible staining and laboratory analytical results for the preliminary soil samples, specifically in the vicinity of surface soil sample SS01. Excavation activities were performed using track-mounted backhoe and transport vehicle. The excavation occurred on pad. To direct excavation activities, soil was screened for volatile aromatic hydrocarbons and chloride. The excavation was completed to a depth of 0.75 feet bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Due to the shallow depth of the excavation, the sidewalls were incorporated into the floor samples. Composite soil samples FS01 through FS08 were collected from the floor of the excavation at a depth of 0.75 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 4.

The excavation area measured approximately 1,626 square feet in areal extent. A total of 45 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH04 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and the reclamation requirement. Additionally, laboratory analytical results for lateral delineation soil samples SS09 through SS12, collected around the release extent, were compliant with the most stringent Table 1 Closure Criteria and successfully defined the lateral extent of the release.

Laboratory analytical results for excavation floor samples FS01 through FS08 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation requirement. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.



CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the January 2022, crude oil flare fire. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, delineation potholes, and lateral delineation soil samples, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation requirement. Based on the soil sample analytical results, no further remediation was required. COG will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater was estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. COG believes these remedial actions are protective of human health, the environment, and groundwater. As such, COG respectfully requests closure for Incident Number NAPP2203830124. A Final C-141 is included as Appendix F.

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

Sincerely, Ensolum, LLC

Kalei Jennings Senior Scientist Daniel R. Moir, P.G. Senior Managing Geologist

cc: Charles Beauvais, COG Operating, LLC

Appendices:

Figure 1	Site Receptor Map
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lei Jennings

Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic Soil Sampling Logs

Appendix C Photographic Log

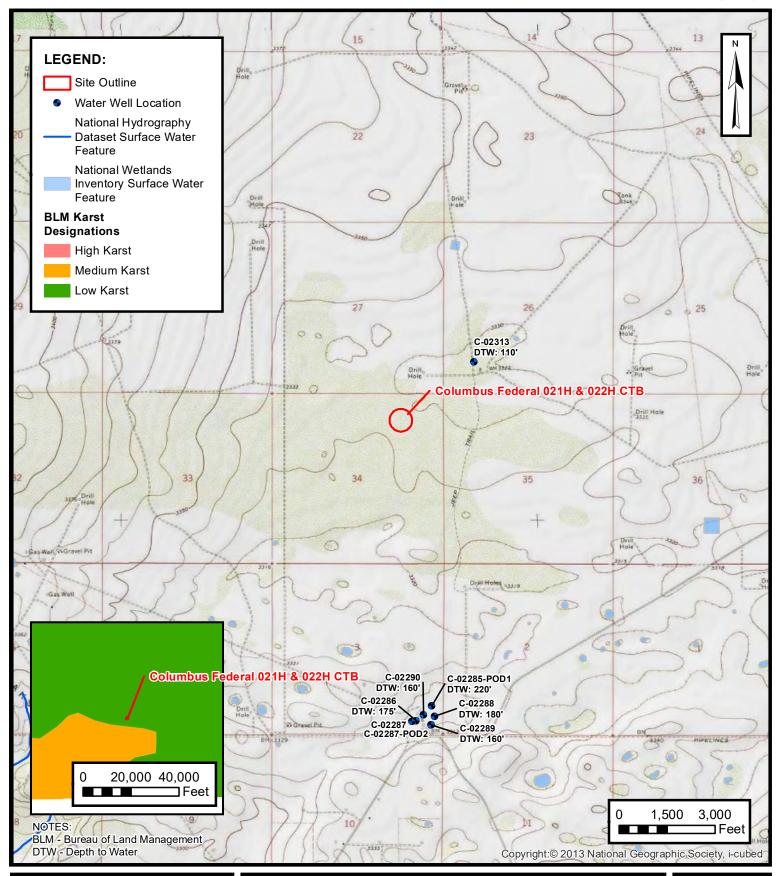
Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix E NMOCD Sample Notification

Appendix F Final C-141



FIGURES

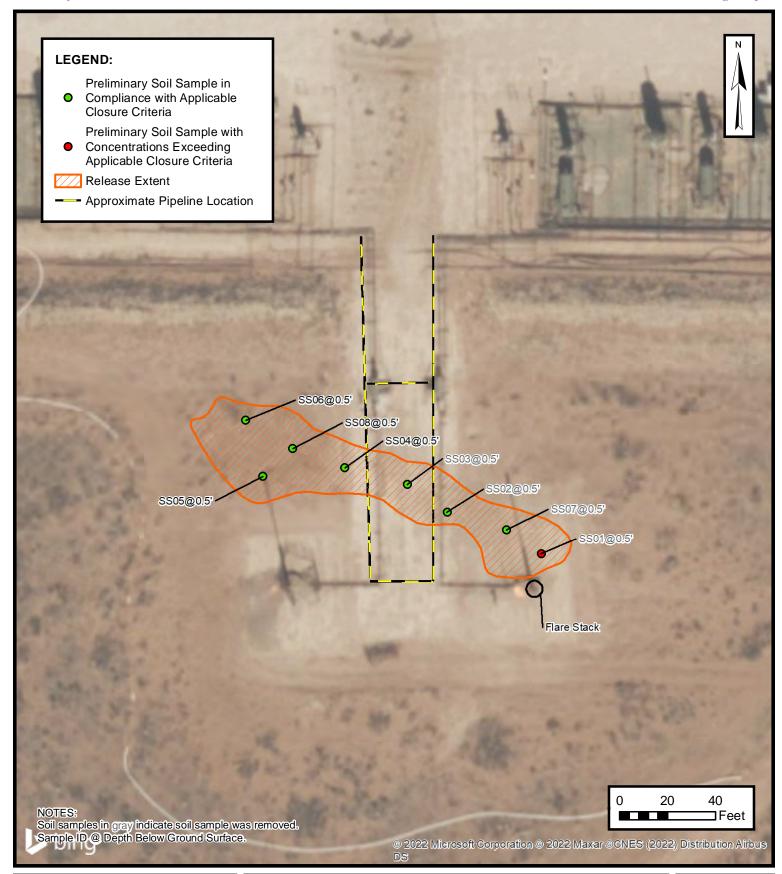




SITE RECEPTOR MAP

COG OPERATING, LLC
COLUMBUS FEDERAL 021H & 022H CTB
NAPP2203830124
Unit A, Sec 34 T25S R33E
Lea County, New Mexico

FIGURE

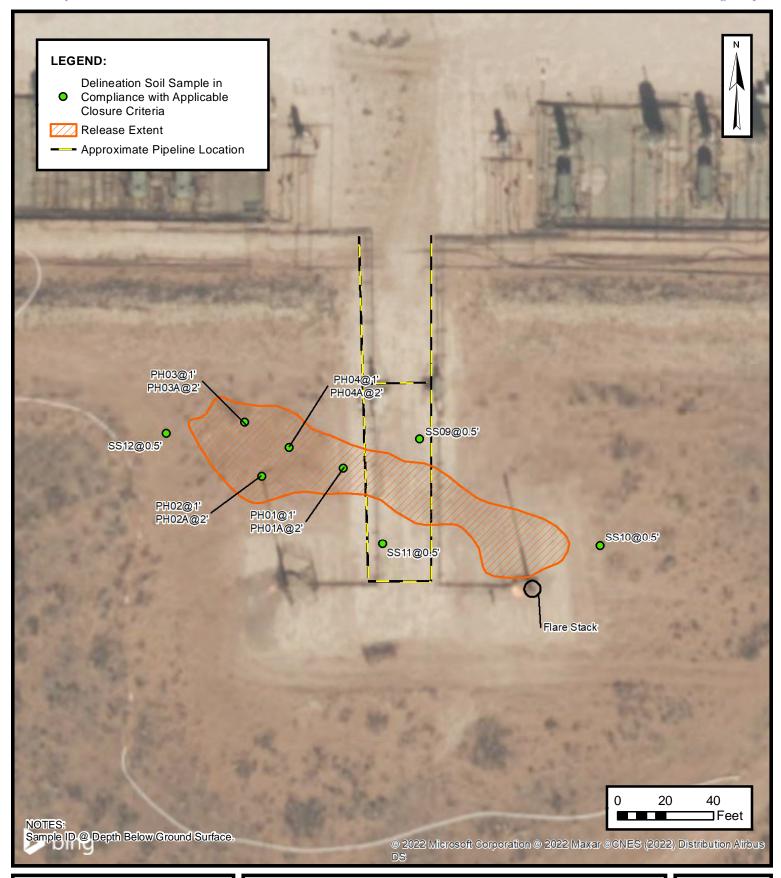




PRELIMINARY SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
COLUMBUS FEDERAL 021H & 022H CTB
NAPP2203830124
Unit A, Sec 34 T25S R33E
Lea County, New Mexico

FIGURE

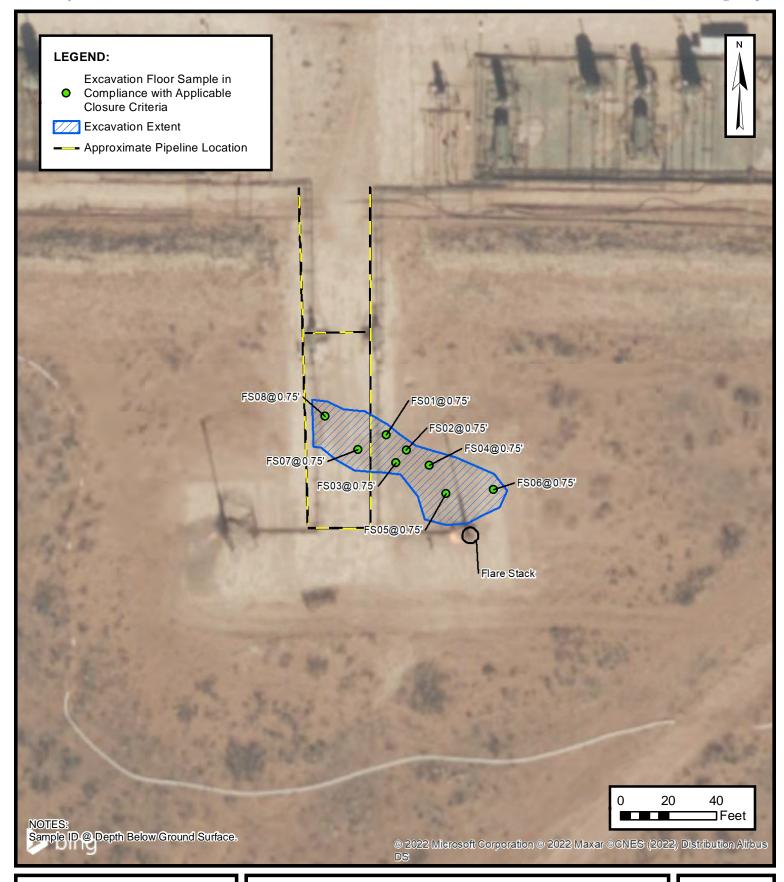




DELINEATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
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NAPP2203830124
Unit A, Sec 34 T25S R33E
Lea County, New Mexico

FIGURE





EXCAVATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
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NAPP2203830124
Unit A, Sec 34 T25S R33E
Lea County, New Mexico

FIGURE



TABLES

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Columbus Federal 021H & 022H CTB COG Operating, LLC Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 C	losure Criteria (NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
				Preliminar	y Assessment S	oil Samples				
SS01	06/13/2022	0.5	<0.00201	< 0.00402	<50.0	2,140	<50.0	2,140	2,950	44.0
SS02	06/13/2022	0.5	<0.00202	< 0.00404	<49.9	229	<49.9	229	377	14.0
SS03	06/13/2022	0.5	< 0.00200	< 0.00399	<49.9	67.4	<49.9	67.4	156	30.9
SS04	06/13/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	11.7
SS05	06/13/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	8.32
SS06	06/13/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	8.50
SS07	06/13/2022	0.5	< 0.00199	<0.00398	<49.9	592	<49.9	592	960	141
SS08	06/13/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	7.87
SS09	07/08/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
SS10	07/08/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	8.81
SS11	07/08/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	25.0
SS12	07/08/2022	0.5	<0.00199	<0.00398	<50.0	19.4	<50.0	19.4	19.4	<4.98
				Del	ineation Soil San	nples				
PH01	07/08/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	<4.99
PH01A	07/08/2022	2	< 0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<4.96
PH02	07/08/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	16.1
PH02A	07/08/2022	2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	11.9
PH03	07/08/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	<5.02
PH03A	07/08/2022	2	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	<4.97
PH04	07/08/2022	1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	<5.03
PH04A	07/08/2022	2	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	8.16

Ensolum 1 of 2

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Columbus Federal 021H & 022H CTB COG Operating, LLC Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)		
NMOCD Table 1 Cl	NMOCD Table 1 Closure Criteria (NMAC 19.15.29)		10	50	NE	NE	NE	1,000	2,500	20,000		
				Excavation Floor Soil Samples								
FS01	07/07/2022	0.75	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	16.4		
FS02	07/07/2022	0.75	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	25.2		
FS03	07/07/2022	0.75	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	30.1		
FS04	07/07/2022	0.75	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	43.9		
FS05	07/07/2022	0.75	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	52.5		
FS06	07/07/2022	0.75	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	67.1		
FS07	07/08/2022	0.75	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	35.1		
FS08	07/08/2022	0.75	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	10.6		

Notes:

bgs: below ground surface mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Grey text represents samples that have been excavated

Ensolum 2 of 2

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



APPENDIX A

Referenced Well Records



New Mexico Office of the State Engineer

Water Right Summary



WR File Number:

C 02313

Subbasin: CUB

Cross Reference: -

Primary Purpose:

72-12-1 LIVESTOCK WATERING

Primary Status:

DECLARATION

Total Acres:

Subfile:

Cause/Case: -

Total Diversion:

NGL WATER SOLUTIONS PERMIAN

Owner: Contact:

R CHARLES WILKIN

Documents on File

			Sta	atus		From/			
Trn #	Doc	File/Act	1	2	Transaction Desc.	To	Acres	Diversion	Consumptive
get 633160 images	COWNF	2018-09-17	CHG	PRC	C 02313	T	0	0	
207100	COWNF	2001-01-03	CHG	PRC	C 02313	T	0	0	
get <u>144654</u> images	DCL 19	998-02-09	DCL	PRC	C 02313 AMENDMENT	T	0	3	
<u>198282</u>	DCL 19	993-04-20	DCL	PRC	C 02313	T	0	3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number C 02313

Well Tag Source 64Q16Q4Sec Tws Rng 2 3 3 26 25S 33E 636971 3552098*

Other Location Desc

Header: -

An () after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1925	DCL	0	3	<u>C 02313</u>

Place of Use

Q Q 256 64 O16 O4Sec Tws Rng	Acres	Diversion	CU Use Priority	Status Other Location Desc
g	0	3	STK	DCL NO PLACE OF USE GIVEN
	0	3	STK 06/30/1925	DCL NO PLACE OF USE GIVEN



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**

Q64 Q16 Q4 Sec Tws Rng

C 02313

3 26 25S 33E

636971

3552098*

Driller License:

Driller Company:

Driller Name:

UNKNOWN

Drill Start Date:

01/01/1925

Drill Finish Date:

06/30/1925

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield: 60 GPM

Casing Size:

6.88

Depth Well:

150 feet

Depth Water:

110 feet

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

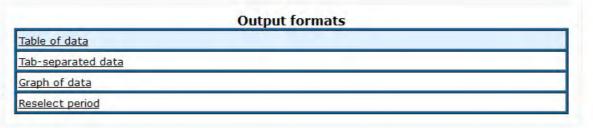
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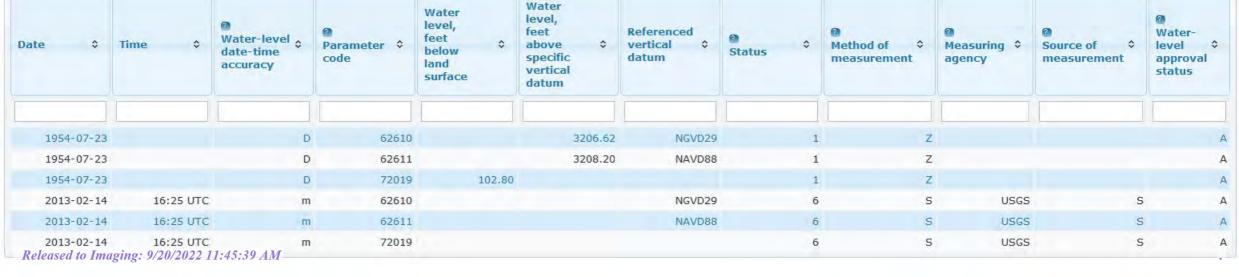
POINT OF DIVERSION SUMMARY

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^{*}UTM location was derived from PLSS - see Help

Lea County, New Mexico
Latitude 32°04'07", Longitude 103°33'10" NAD27
Land-surface elevation 3,311 feet above NAVD88
The depth of the well is 180 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

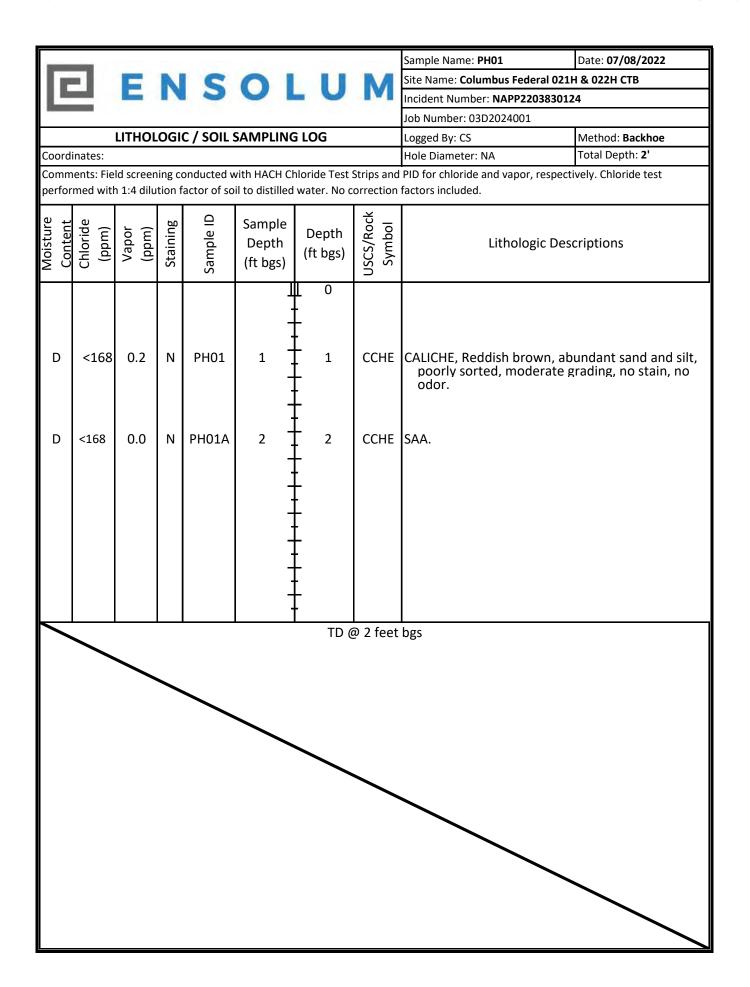


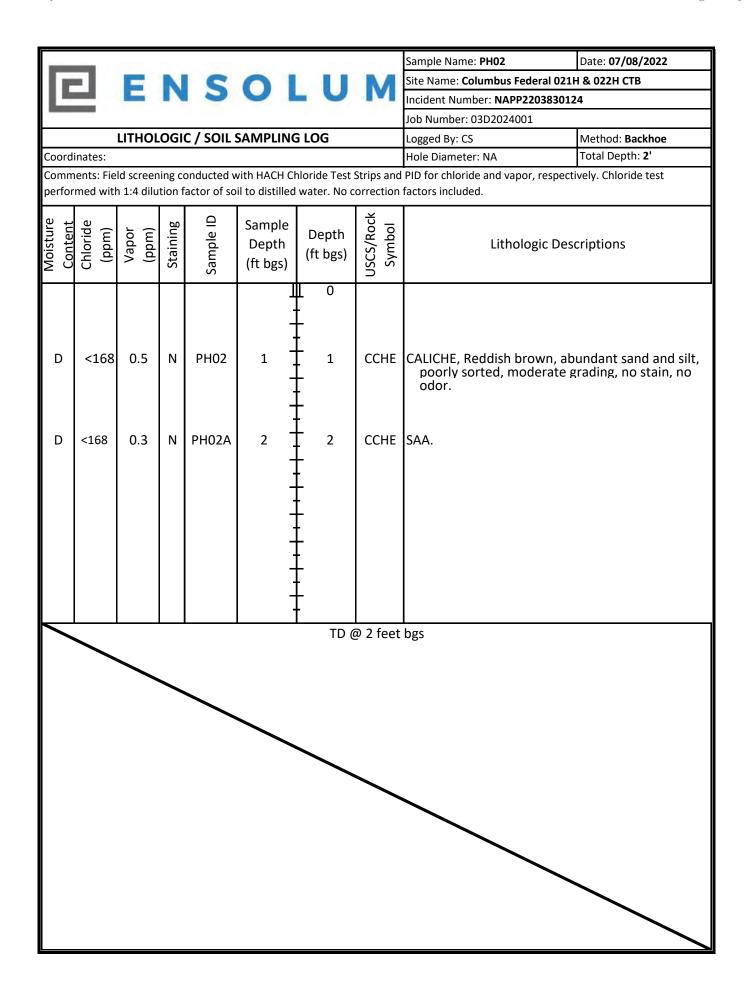


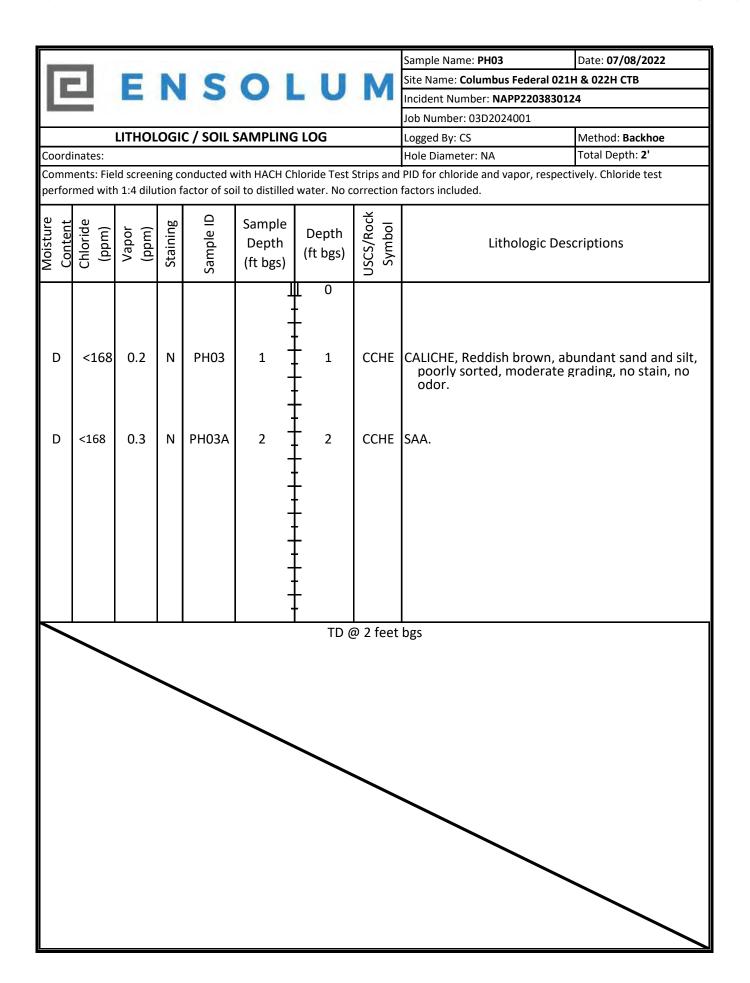


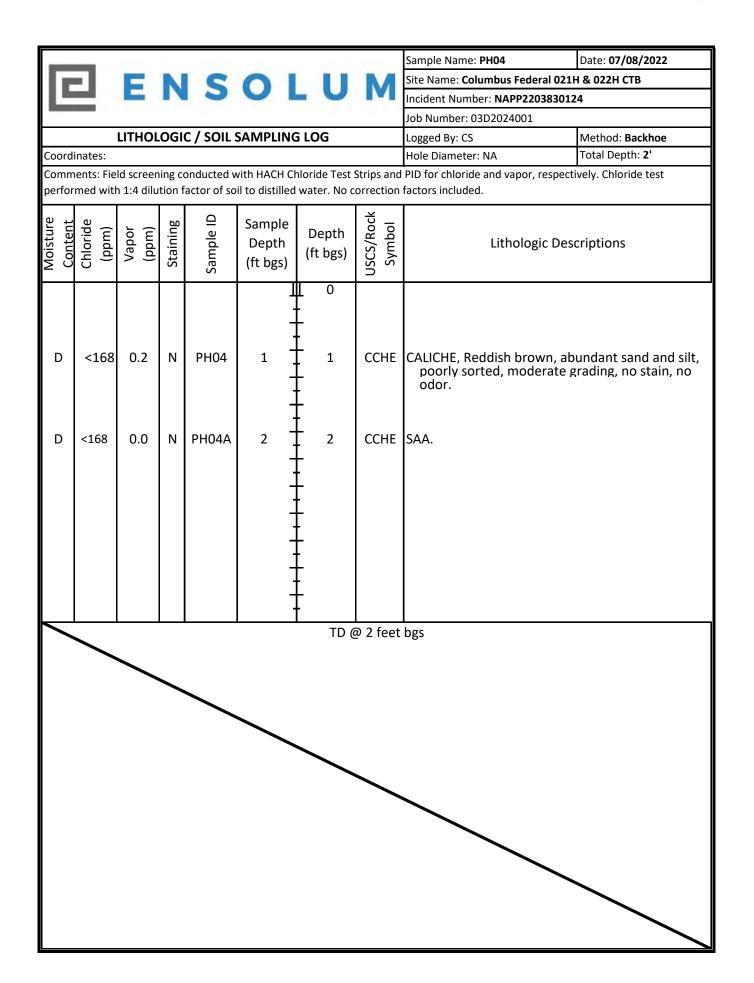
APPENDIX B

Lithologic Soil Sampling Logs











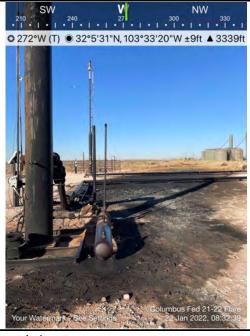
APPENDIX C

Photographic Log

ENSOLUM

Photographic Log

COG Operating, LLC
Columbus Federal 021H & 022H CTB
Incident Number NAPP2203830124





Photograph 1

Date: January 22, 2022

Description: Photo of release area.

Photograph 2

Date: July 8, 2022

Description: Photo of excavation activities.





Photograph 3

Date: July 8, 2022

Description: Photo of excavation activities.

Photograph 4

Date: July 8, 2022

Description: Photo of excavation activities.



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

EOL

Have a Question?

www.eurofinsus.com/Env

Released to Imaging: 9/20/2022 11:45:39 AM

Visit us at:

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2409-1

Laboratory Sample Delivery Group: 03D2024001 Client Project/Site: Columbus Fed 021 & 022H CTB

Revision: 1

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMPR

Authorized for release by: 6/22/2022 2:38:30 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: Columbus Fed 021 & 022H CTB

Laboratory Job ID: 890-2409-1 SDG: 03D2024001

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Definitions/Glossary

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB

SDG: 03D2024001

Qualifiers

GC VOA Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

LCS/LCSD RPD exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description**

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)

Dilution Factor Dil Fac

Detection Limit (DoD/DOE) DΙ

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**

Presumptive **PRES** 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: Columbus Fed 021 & 022H CTB

Job ID: 890-2409-1

SDG: 03D2024001

Job ID: 890-2409-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2409-1

REVISION

The report being provided is a revision of the original report sent on 6/20/2022. The report (revision 1) is being revised due to Per client email, correct site name.

Report revision history

Receipt

The samples were received on 6/13/2022 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 30.0°C

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

GC Semi VOA

Method 8015MOD NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-27556 and analytical batch 880-27563 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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

HPLC/IC

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

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Client Sample ID: SS01 Lab Sample ID: 890-2409-1 Date Collected: 06/13/22 11:40

Matrix: Solid

Date Received: 06/13/22 15:33 Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		06/16/22 14:55	06/17/22 15:44	1
Toluene	<0.00201	U	0.00201	mg/Kg		06/16/22 14:55	06/17/22 15:44	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/16/22 14:55	06/17/22 15:44	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/16/22 14:55	06/17/22 15:44	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/16/22 14:55	06/17/22 15:44	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/16/22 14:55	06/17/22 15:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130			06/16/22 14:55	06/17/22 15:44	1
1,4-Difluorobenzene (Surr)	103		70 - 130			06/16/22 14:55	06/17/22 15:44	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			06/17/22 16:19	

Method: 8015 NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result (Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2950		50.0	mg/Kg			06/16/22 09:49	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0	mg/Kg		06/15/22 08:52	06/15/22 17:40	1
Diesel Range Organics (Over C10-C28)	2140		50.0	mg/Kg		06/15/22 08:52	06/15/22 17:40	1
Oll Range Organics (Over C28-C36)	808		50.0	mg/Kg		06/15/22 08:52	06/15/22 17:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			06/15/22 08:52	06/15/22 17:40	1
o-Terphenyl	125		70 - 130			06/15/22 08:52	06/15/22 17:40	1

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	44.0		5.03	mg/Kg			06/17/22 19:00	1	

Client Sample ID: SS02 Lab Sample ID: 890-2409-2 Date Collected: 06/13/22 11:45 **Matrix: Solid** Date Received: 06/13/22 15:33

Sample Depth: 0.5

Method: 8021B - Volatile	Organic Compo	unds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		06/16/22 14:55	06/17/22 16:04	1
Toluene	<0.00202	U	0.00202	mg/Kg		06/16/22 14:55	06/17/22 16:04	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		06/16/22 14:55	06/17/22 16:04	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		06/16/22 14:55	06/17/22 16:04	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		06/16/22 14:55	06/17/22 16:04	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		06/16/22 14:55	06/17/22 16:04	1

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Job ID: 890-2409-1

Client: Ensolum Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Client Sample ID: SS02 Lab Sample ID: 890-2409-2 Date Collected: 06/13/22 11:45 **Matrix: Solid**

Date Received: 06/13/22 15:33

Sample Depth: 0.5

Surrogate	%Recovery Qualific	er Limits	Prepared Ana	alyzed Dil Fac
4-Bromofluorobenzene (Surr)	113	70 - 130	06/16/22 14:55 06/17/	/22 16:04 1
1,4-Difluorobenzene (Surr)	99	70 - 130	06/16/22 14:55 06/17/	/22 16:04 1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00404	U	0.00404	mg/Kg			06/17/22 16:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	377		49.9	mg/Kg			06/16/22 09:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		06/15/22 08:52	06/15/22 18:02	1
Diesel Range Organics (Over C10-C28)	229		49.9	mg/Kg		06/15/22 08:52	06/15/22 18:02	1
Oll Range Organics (Over C28-C36)	148		49.9	mg/Kg		06/15/22 08:52	06/15/22 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	06/15/22 08:52	06/15/22 18:02	1
o-Terphenyl	129		70 - 130	06/15/22 08:52	06/15/22 18:02	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.0		5.03	mg/Kg			06/17/22 18:14	1

Lab Sample ID: 890-2409-3 Client Sample ID: SS03 Matrix: Solid

Date Collected: 06/13/22 11:50 Date Received: 06/13/22 15:33

Sample Depth: 0.5

Method: 8021B - Volatile	Organic Compounds	(GC)
Analyte	Result Qualif	fier

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 16:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 16:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 16:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		06/16/22 14:55	06/17/22 16:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 16:25	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		06/16/22 14:55	06/17/22 16:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			06/16/22 14:55	06/17/22 16:25	1

4-Bromofluorobenzene (Surr)	114	70 - 130	06/16/22 14:55 06/17/22 16:25 1
1,4-Difluorobenzene (Surr)	96	70 - 130	06/16/22 14:55 06/17/22 16:25 1
Г			

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg	_		06/17/22 16:19	1

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Matrix: Solid

Lab Sample ID: 890-2409-3

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Client Sample ID: SS03

Date Collected: 06/13/22 11:50 Date Received: 06/13/22 15:33

Sample Depth: 0.5

Method: 8015 NM - Diesel Rar	Method: 8015 NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac				
Total TPH	156	49.9	mg/Kg			06/16/22 09:49	1				

_Total TPH _	156		49.9	mg/Kg			06/16/22 09:49	1
Method: 8015B NM - Diesel R	ange Organi	ics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		06/15/22 08:52	06/15/22 18:23	1
Diesel Range Organics (Over C10-C28)	67.4		49.9	mg/Kg		06/15/22 08:52	06/15/22 18:23	1
Oll Range Organics (Over C28-C36)	88.1		49.9	mg/Kg		06/15/22 08:52	06/15/22 18:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130			06/15/22 08:52	06/15/22 18:23	1
o-Terphenyl	118		70 - 130			06/15/22 08:52	06/15/22 18:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result Q	ualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.9		5.05	mg/Kg			06/17/22 18:23	1

Lab Sample ID: 890-2409-4 **Client Sample ID: SS04** Date Collected: 06/13/22 11:55 **Matrix: Solid**

Date Received: 06/13/22 15:33

Sample Denth: 0.5

Analyte

C10-C28)

(GRO)-C6-C10

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 16:45	1
Toluene	< 0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 16:45	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 16:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		06/16/22 14:55	06/17/22 16:45	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 16:45	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/16/22 14:55	06/17/22 16:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130			06/16/22 14:55	06/17/22 16:45	1
1,4-Difluorobenzene (Surr)	96		70 - 130			06/16/22 14:55	06/17/22 16:45	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			06/17/22 16:19	1
Method: 8015 NM - Diesel	Range Organic	s (DRO) (0	GC)					
			-					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Dil Fac

Analyzed

Prepared

06/15/22 08:52 06/15/22 18:46

06/15/22 08:52 06/15/22 18:46

06/15/22 08:52 06/15/22 18:46

RL

50.0

50.0

50.0

Unit

mg/Kg

mg/Kg

mg/Kg

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

Result Qualifier

<50.0 U *1

<50.0 U

<50.0 U

Job ID: 890-2409-1 SDG: 03D2024001

Client: Ensolum Project/Site: Columbus Fed 021 & 022H CTB

Lab Sample ID: 890-2409-4

Client Sample ID: SS04 Date Collected: 06/13/22 11:55 Date Received: 06/13/22 15:33

Matrix: Solid

Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared Analy	zed	Dil Fac
1-Chlorooctane	105		70 - 130	06/15/22 08:52 06/15/22	2 18:46	1
o-Terphenyl	121		70 - 130	06/15/22 08:52 06/15/2	2 18:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride 4.97 06/17/22 18:32 11.7 mg/Kg

Lab Sample ID: 890-2409-5

Client Sample ID: SS05

Date Collected: 06/13/22 12:00 **Matrix: Solid**

Date Received: 06/13/22 15:33

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:06	1
Toluene	< 0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:06	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		06/16/22 14:55	06/17/22 17:06	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/16/22 14:55	06/17/22 17:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110	· -	70 - 130			06/16/22 14:55	06/17/22 17:06	1

	, o			, ,	
4-Bromofluorobenzene (Surr)	110	70 - 130	06/16/22 14:55	06/17/22 17:06	1
1,4-Difluorobenzene (Surr)	97	70 - 130	06/16/22 14:55	06/17/22 17:06	1
Г., ., . <u></u>					

Method: Total BTEX - Total BTEX Calculation									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Total BTEX	<0.00398	U	0.00398	mg/Kg			06/17/22 16:19	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Total TPH	<49.9	U	49.9	mg/Kg			06/16/22 09:49	1

Analyte	Result	Qualifier	KL	Unit	ט	Prepared	Analyzed	DII Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/16/22 09:49	1
 Method: 8015B NM - Diesel Ra	nge Organ	ics (DRO) ((GC)					

Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		06/15/22 08:52	06/15/22 19:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/15/22 08:52	06/15/22 19:07	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/15/22 08:52	06/15/22 19:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	06/15/22 08:52	06/15/22 19:07	1
o-Terphenyl	108		70 - 130	06/15/22 08:52	06/15/22 19:07	1
_						

Method: 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	8.32		4.96	mg/Kg			06/17/22 18:41	1

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Matrix: Solid

Lab Sample ID: 890-2409-6

06/15/22 08:52 06/15/22 19:29

06/15/22 08:52 06/15/22 19:29

Lab Sample ID: 890-2409-7

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Client Sample ID: SS06

Date Collected: 06/13/22 12:05 Date Received: 06/13/22 15:33

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 17:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 17:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 17:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		06/16/22 14:55	06/17/22 17:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 17:26	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		06/16/22 14:55	06/17/22 17:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			06/16/22 14:55	06/17/22 17:26	1
1,4-Difluorobenzene (Surr)	85		70 - 130			06/16/22 14:55	06/17/22 17:26	1
Method: Total BTEX - Tota	I BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Total BTEX	Result < 0.00399		RL 0.00399	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 06/17/22 16:19	Dil Fac
Total BTEX	<0.00399	U	0.00399		<u>D</u>	Prepared		Dil Fac
	<0.00399	U	0.00399		<u>D</u> D	Prepared Prepared		Dil Fac Dil Fac
Total BTEX Method: 8015 NM - Diesel	<0.00399	s (DRO) (C	0.00399 GC)	mg/Kg	_ =	· ·	06/17/22 16:19	1
Total BTEX Method: 8015 NM - Diesel Analyte Total TPH	<0.00399 Range Organic Result <50.0	S (DRO) (C Qualifier	0.00399 Columbia	mg/Kg	_ =	· ·	06/17/22 16:19 Analyzed	1
Total BTEX Method: 8015 NM - Diesel Analyte	<0.00399 Range Organic Result <50.0 el Range Organ	S (DRO) (C Qualifier	0.00399 Columbia	mg/Kg	_ =	· ·	06/17/22 16:19 Analyzed	1

Surrogate	%Recovery	Qualifier L	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	06/15/22 08:52	06/15/22 19:29	1
o-Terphenyl	109	7	70 - 130	06/15/22 08:52	06/15/22 19:29	1
_						

50.0

50.0

mg/Kg

mg/Kg

Method: 300.0 - Anions, Ion Chromatography - Soluble

<50.0 U

<50.0 U

Result Qualifier Analyte RL Unit D Prepared Analyzed Dil Fac Chloride 8.50 4.99 mg/Kg 06/17/22 18:51

Client Sample ID: SS07 Date Collected: 06/13/22 12:45 Date Received: 06/13/22 15:33

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

C10-C28)

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:47	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:47	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		06/16/22 14:55	06/17/22 17:47	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/16/22 14:55	06/17/22 17:47	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/16/22 14:55	06/17/22 17:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			06/16/22 14:55	06/17/22 17:47	1

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Matrix: Solid

6/22/2022 (Rev. 1)

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Client Sample ID: SS07 Lab Sample ID: 890-2409-7

Date Collected: 06/13/22 12:45

Date Received: 06/13/22 15:33

Matrix: Solid

Sample Depth: 0.5

Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	88	70 - 130	06/16/22 14:55 0	6/17/22 17:47	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398	U	0.00398	mg/Kg			06/17/22 16:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	960		49.9	mg/Kg			06/16/22 09:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		06/15/22 08:52	06/15/22 19:51	1
Diesel Range Organics (Over C10-C28)	592		49.9	mg/Kg		06/15/22 08:52	06/15/22 19:51	1
Oll Range Organics (Over C28-C36)	368		49.9	mg/Kg		06/15/22 08:52	06/15/22 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	06/15/22 08:52	06/15/22 19:51	1
o-Terphenyl	112		70 - 130	06/15/22 08:52	06/15/22 19:51	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualific	er RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	141	25.0	mg/Kg			06/17/22 19:09	5

Client Sample ID: SS08

Lab Sample ID: 890-2409-8

Matrix: Solid

Date Collected: 06/13/22 12:50
Date Received: 06/13/22 15:33

Sample Depth: 0.5

Method: 8021B - Volatile O	ethod: 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Benzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 18:07	1		
Toluene	< 0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 18:07	1		
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 18:07	1		
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		06/16/22 14:55	06/17/22 18:07	1		
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 18:07	1		
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		06/16/22 14:55	06/17/22 18:07	1		
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	109		70 - 130			06/16/22 14:55	06/17/22 18:07	1		
1,4-Difluorobenzene (Surr)	94		70 - 130			06/16/22 14:55	06/17/22 18:07	1		

N/1 - 4 -	Total BTEX	Tatale	TEV A-	
I WIDTHOU:	INTAL RIEX	- Intal F	(- 3	ICHISTIAN

momount rotal Brazil	Total Billy Calcula								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00399	U	0.00399	ma/Ka			06/17/22 16:19		

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Date Received: 06/13/22 15:33

Client Sample Results

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Lab Sample ID: 890-2409-8 **Client Sample ID: SS08** Date Collected: 06/13/22 12:50

Matrix: Solid

Sample Depth: 0.5

Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/16/22 09:49	1
- Method: 8015B NM - Diesel R	ange Organi	ics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0	mg/Kg		06/15/22 08:52	06/15/22 20:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/15/22 08:52	06/15/22 20:12	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/15/22 08:52	06/15/22 20:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			06/15/22 08:52	06/15/22 20:12	1
o-Terphenyl	112		70 - 130			06/15/22 08:52	06/15/22 20:12	1
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solι	ıble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.87		5.00	mg/Kg			06/17/22 19:18	1

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Surrogate Summary

Client: Ensolum Job ID: 890-2409-1
Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)				
		BFB1	DFBZ1			
Lab Sample ID	Client Sample ID	(70-130)	70-130)			
890-2404-A-29-E MS	Matrix Spike	107	97			
890-2404-A-29-F MSD	Matrix Spike Duplicate	110	101			
890-2409-1	SS01	113	103			
890-2409-2	SS02	113	99			
890-2409-3	SS03	114	96			
890-2409-4	SS04	113	96			
890-2409-5	SS05	110	97			
890-2409-6	SS06	107	85			
890-2409-7	SS07	103	88			
390-2409-8	SS08	109	94			
_CS 880-27712/1-A	Lab Control Sample	107	98			
LCSD 880-27712/2-A	Lab Control Sample Dup	107	99			
	Method Blank	97	90			

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)				
		1CO1	OTPH1			
Lab Sample ID	Client Sample ID	(70-130)	(70-130)			
880-15888-A-1-B MS	Matrix Spike	88	91			
880-15888-A-1-C MSD	Matrix Spike Duplicate	89	92			
890-2409-1	SS01	105	125			
890-2409-2	SS02	118	129			
890-2409-3	SS03	104	118			
890-2409-4	SS04	105	121			
890-2409-5	SS05	92	108			
890-2409-6	SS06	97	109			
890-2409-7	SS07	99	112			
890-2409-8	SS08	93	112			
LCS 880-27556/2-A	Lab Control Sample	103	113			
LCSD 880-27556/3-A	Lab Control Sample Dup	93	106			
MB 880-27556/1-A	Method Blank	99	114			

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-2409-1
Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-27712/5-A

Matrix: Solid

Analysis Batch: 27743

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27712

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 10:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 10:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 10:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/16/22 14:55	06/17/22 10:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/16/22 14:55	06/17/22 10:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/16/22 14:55	06/17/22 10:55	1
	MD	MD						

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97	70 - 130	06/16/22 14:55	06/17/22 10:55	1
1,4-Difluorobenzene (Surr)	90	70 - 130	06/16/22 14:55	06/17/22 10:55	1

Lab Sample ID: LCS 880-27712/1-A

Matrix: Solid

Analysis Batch: 27743

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 27712

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.1085 70 - 130 0.100 mg/Kg 109 Toluene 0.100 0.1074 mg/Kg 70 - 130 107 Ethylbenzene 0.100 0.1095 mg/Kg 109 70 - 130 m-Xylene & p-Xylene 0.200 0.2257 mg/Kg 113 70 - 130 o-Xylene 0.100 0.1117 mg/Kg 112 70 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 880-27712/2-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 27743

Prep Type: Total/NA
Prep Batch: 27712

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1030		mg/Kg		103	70 - 130	5	35
Toluene	0.100	0.1008		mg/Kg		101	70 - 130	6	35
Ethylbenzene	0.100	0.1033		mg/Kg		103	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2124		mg/Kg		106	70 - 130	6	35
o-Xylene	0.100	0.1051		mg/Kg		105	70 - 130	6	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 890-2404-A-29-E MS

Matrix: Solid

Analysis Batch: 27743

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

Prep Batch: 27712

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0996	0.09284		mg/Kg		93	70 - 130	
Toluene	<0.00200	U	0.0996	0.09128		mg/Kg		92	70 - 130	

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Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

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

Lab Sample ID: 890-2404-A-29-E MS **Client Sample ID: Matrix Spike Matrix: Solid** Prep Type: Total/NA Prep Batch: 27712 **Analysis Batch: 27743**

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00200 U 0.0996 0.09243 mg/Kg 93 70 - 130 m-Xylene & p-Xylene <0.00401 U 0.199 0.1923 mg/Kg 97 70 - 130 <0.00200 U 0.0996 0.09482 o-Xylene mg/Kg 95 70 _ 130

MS MS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 107 1,4-Difluorobenzene (Surr) 70 - 130 97

Lab Sample ID: 890-2404-A-29-F MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Solid Analysis Batch: 27743

Prep Batch: 27712 Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Analyte <0.00200 U 0.0994 0.09569 96 70 - 130 3 Benzene mg/Kg

35 Toluene <0.00200 U 0.0994 0.09258 93 70 - 130 35 mg/Kg 1 Ethylbenzene <0.00200 U 0.0994 0.09487 mg/Kg 95 70 - 130 3 35 m-Xylene & p-Xylene <0.00401 U 0.199 0.1947 98 70 - 130 35 mq/Kq <0.00200 U 0.0994 0.09552 96 35 o-Xylene mg/Kg 70 - 130

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 70 - 130 110 1,4-Difluorobenzene (Surr) 101 70 - 130

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

Lab Sample ID: MB 880-27556/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 27563 Prep Batch: 27556 MB MB Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac

<50.0 U 50.0 06/15/22 08:52 06/15/22 11:07 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 06/15/22 08:52 06/15/22 11:07 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 mg/Kg 06/15/22 08:52 06/15/22 11:07

MB MB Qualifier Surrogate %Recovery Limits Prepared Dil Fac Analyzed 1-Chlorooctane 70 - 130 06/15/22 08:52 06/15/22 11:07 99 70 - 130 06/15/22 08:52 06/15/22 11:07 o-Terphenyl 114

Lab Sample ID: LCS 880-27556/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 27563 Prep Batch: 27556 Snika

	Spike	LUS	LUS				70Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1104		mg/Kg		110	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1083		mg/Kg		108	70 - 130	
C10-C28)								

Limits

70 - 130

70 - 130

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

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

Lab Sample ID: LCS 880-27556/2-A

Matrix: Solid

Analysis Batch: 27563

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27556

LCS LCS %Recovery Qualifier Surrogate 1-Chlorooctane 103

Lab Sample ID: LCSD 880-27556/3-A

Matrix: Solid

o-Terphenyl

Analysis Batch: 27563

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27556

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 837.3 *1 mg/Kg 84 70 - 130 27 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1017 mg/Kg 102 70 - 130 6 20 C10-C28)

LCSD LCSD

113

Surrogate	%Recovery	Qualifier	Limits		
1-Chlorooctane	93		70 - 130		
o-Terphenyl	106		70 - 130		

Lab Sample ID: 880-15888-A-1-B MS **Client Sample ID: Matrix Spike**

Matrix: Solid

Analysis Batch: 27563

Prep Type: Total/NA Prep Batch: 27556

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Limits Analyte Unit D %Rec Gasoline Range Organics <49.9 U *1 998 838.6 mg/Kg 82 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 998 <49.9 U 808.9 mg/Kg 81 70 - 130

C10-C28)

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 70 - 130 88 o-Terphenyl 91 70 - 130

Lab Sample ID: 880-15888-A-1-C MSD

Matrix: Solid

Analysis Batch: 27563

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

Prep Batch: 27556

%Rec **RPD** Limits **RPD** Limit 70 - 130 0 20

Result Qualifier Added Result Qualifier Analyte Unit %Rec Gasoline Range Organics <49.9 U *1 999 842.4 82 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 851.7 mg/Kg 85 70 - 130 5 20

MSD MSD

Spike

C10-C28)

MSD MSD

Sample Sample

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	92		70 - 130

Client: Ensolum Project/Site: Columbus Fed 021 & 022H CTB

Job ID: 890-2409-1 SDG: 03D2024001

Prep Type: Soluble

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-27509/1-A

Lab Sample ID: LCS 880-27509/2-A

Matrix: Solid

Analysis Batch: 27702

MB MB

Analyte Result Qualifier RL Unit Analyzed Dil Fac D Prepared 5.00 06/17/22 13:12 Chloride <5.00 U mg/Kg

Client Sample ID: Lab Control Sample

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Prep Type: Soluble

Client Sample ID: Method Blank

Matrix: Solid Analysis Batch: 27702

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 265.3 90 - 110 mg/Kg 106

Lab Sample ID: LCSD 880-27509/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 27702

Spike LCSD LCSD %Rec RPD Added Result Qualifier Limits **RPD** Limit **Analyte** Unit %Rec Chloride 250 264.4 106 90 - 110 20 mg/Kg

Lab Sample ID: 880-15887-A-6-B MS **Client Sample ID: Matrix Spike Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 27702

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 248 625.5 367 mg/Kg 104 90 - 110

Lab Sample ID: 880-15887-A-6-C MSD

Matrix: Solid

Analysis Batch: 27702

MSD MSD RPD Sample Sample Spike %Rec Analyte Result Qualifier Added Unit Limits RPD Result Qualifier %Rec Limit Chloride 367 248 625.5 104 20 mg/Kg 90 - 110 0

Client: Ensolum

Project/Site: Columbus Fed 021 & 022H CTB

Job ID: 890-2409-1

SDG: 03D2024001

GC VOA

Prep Batch: 27712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-1	SS01	Total/NA	Solid	5035	
890-2409-2	SS02	Total/NA	Solid	5035	
890-2409-3	SS03	Total/NA	Solid	5035	
890-2409-4	SS04	Total/NA	Solid	5035	
890-2409-5	SS05	Total/NA	Solid	5035	
890-2409-6	SS06	Total/NA	Solid	5035	
890-2409-7	SS07	Total/NA	Solid	5035	
890-2409-8	SS08	Total/NA	Solid	5035	
MB 880-27712/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-27712/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-27712/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2404-A-29-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2404-A-29-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 27743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-1	SS01	Total/NA	Solid	8021B	27712
890-2409-2	SS02	Total/NA	Solid	8021B	27712
890-2409-3	SS03	Total/NA	Solid	8021B	27712
890-2409-4	SS04	Total/NA	Solid	8021B	27712
890-2409-5	SS05	Total/NA	Solid	8021B	27712
890-2409-6	SS06	Total/NA	Solid	8021B	27712
890-2409-7	SS07	Total/NA	Solid	8021B	27712
890-2409-8	SS08	Total/NA	Solid	8021B	27712
MB 880-27712/5-A	Method Blank	Total/NA	Solid	8021B	27712
LCS 880-27712/1-A	Lab Control Sample	Total/NA	Solid	8021B	27712
LCSD 880-27712/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	27712
890-2404-A-29-E MS	Matrix Spike	Total/NA	Solid	8021B	27712
890-2404-A-29-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	27712

Analysis Batch: 27838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-1	SS01	Total/NA	Solid	Total BTEX	
890-2409-2	SS02	Total/NA	Solid	Total BTEX	
890-2409-3	SS03	Total/NA	Solid	Total BTEX	
890-2409-4	SS04	Total/NA	Solid	Total BTEX	
890-2409-5	SS05	Total/NA	Solid	Total BTEX	
890-2409-6	SS06	Total/NA	Solid	Total BTEX	
890-2409-7	SS07	Total/NA	Solid	Total BTEX	
890-2409-8	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 27556

Lab Sample ID 890-2409-1	Client Sample ID SS01	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
890-2409-2	SS02	Total/NA	Solid	8015NM Prep	
890-2409-3	SS03	Total/NA	Solid	8015NM Prep	
890-2409-4	SS04	Total/NA	Solid	8015NM Prep	
890-2409-5	SS05	Total/NA	Solid	8015NM Prep	
890-2409-6	SS06	Total/NA	Solid	8015NM Prep	

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Client: Ensolum
Project/Site: Columbus Fed 021 & 022H CTB

Job ID: 890-2409-1
SDG: 03D2024001

GC Semi VOA (Continued)

Prep Batch: 27556 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-7	SS07	Total/NA	Solid	8015NM Prep	
890-2409-8	SS08	Total/NA	Solid	8015NM Prep	
MB 880-27556/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-27556/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-27556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-15888-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-15888-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 27563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-1	SS01	Total/NA	Solid	8015B NM	27556
890-2409-2	SS02	Total/NA	Solid	8015B NM	27556
890-2409-3	SS03	Total/NA	Solid	8015B NM	27556
890-2409-4	SS04	Total/NA	Solid	8015B NM	27556
890-2409-5	SS05	Total/NA	Solid	8015B NM	27556
890-2409-6	SS06	Total/NA	Solid	8015B NM	27556
890-2409-7	SS07	Total/NA	Solid	8015B NM	27556
890-2409-8	SS08	Total/NA	Solid	8015B NM	27556
MB 880-27556/1-A	Method Blank	Total/NA	Solid	8015B NM	27556
LCS 880-27556/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	27556
LCSD 880-27556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	27556
880-15888-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	27556
880-15888-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	27556

Analysis Batch: 27671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-1	SS01	Total/NA	Solid	8015 NM	
890-2409-2	SS02	Total/NA	Solid	8015 NM	
890-2409-3	SS03	Total/NA	Solid	8015 NM	
890-2409-4	SS04	Total/NA	Solid	8015 NM	
890-2409-5	SS05	Total/NA	Solid	8015 NM	
890-2409-6	SS06	Total/NA	Solid	8015 NM	
890-2409-7	SS07	Total/NA	Solid	8015 NM	
890-2409-8	SS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 27509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-1	SS01	Soluble	Solid	DI Leach	
890-2409-2	SS02	Soluble	Solid	DI Leach	
890-2409-3	SS03	Soluble	Solid	DI Leach	
890-2409-4	SS04	Soluble	Solid	DI Leach	
890-2409-5	SS05	Soluble	Solid	DI Leach	
890-2409-6	SS06	Soluble	Solid	DI Leach	
890-2409-7	SS07	Soluble	Solid	DI Leach	
890-2409-8	SS08	Soluble	Solid	DI Leach	
MB 880-27509/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-27509/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-27509/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-15887-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	

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 Client: Ensolum
 Job ID: 890-2409-1

 Project/Site: Columbus Fed 021 & 022H CTB
 SDG: 03D2024001

HPLC/IC (Continued)

Leach Batch: 27509 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15887-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 27702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2409-1	SS01	Soluble	Solid	300.0	27509
890-2409-2	SS02	Soluble	Solid	300.0	27509
890-2409-3	SS03	Soluble	Solid	300.0	27509
890-2409-4	SS04	Soluble	Solid	300.0	27509
890-2409-5	SS05	Soluble	Solid	300.0	27509
890-2409-6	SS06	Soluble	Solid	300.0	27509
890-2409-7	SS07	Soluble	Solid	300.0	27509
890-2409-8	SS08	Soluble	Solid	300.0	27509
MB 880-27509/1-A	Method Blank	Soluble	Solid	300.0	27509
LCS 880-27509/2-A	Lab Control Sample	Soluble	Solid	300.0	27509
LCSD 880-27509/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	27509
880-15887-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	27509
880-15887-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	27509

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Project/Site: Columbus Fed 021 & 022H CTB Client Sample ID: SS01

Client: Ensolum

Date Collected: 06/13/22 11:40

Lab Sample ID: 890-2409-1

Matrix: Solid

Date Received: 06/13/22 15:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	27712	06/16/22 14:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	27743	06/17/22 15:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27838	06/17/22 16:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27671	06/16/22 09:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	27556	06/15/22 08:52	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27563	06/15/22 17:40	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	27509	06/15/22 12:53	SC	XEN MID
Soluble	Analysis	300.0		1			27702	06/17/22 19:00	CH	XEN MID

Client Sample ID: SS02 Lab Sample ID: 890-2409-2 Date Collected: 06/13/22 11:45

Date Received: 06/13/22 15:33

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Method Number **Prep Type** Type Run **Factor Amount** Amount or Analyzed **Analyst** Lab Total/NA 5035 27712 06/16/22 14:55 MR XEN MID Prep 4.95 g 5 mL 8021B Total/NA 5 mL 27743 06/17/22 16:04 MR XEN MID Analysis 5 mL 1 Total/NA Total BTEX 06/17/22 16:19 AJ Analysis 1 27838 XEN MID Total/NA 8015 NM 27671 06/16/22 09:49 AJ XEN MID Analysis 1 Total/NA Prep 8015NM Prep 10.02 g 10 mL 27556 06/15/22 08:52 DM XEN MID Total/NA 8015B NM 06/15/22 18:02 AJ XEN MID Analysis 1 27563 Soluble 50 mL 27509 06/15/22 12:53 SC XEN MID Leach DI Leach 4.97 g 300.0 06/17/22 18:14 CH Soluble Analysis 1 27702 **XEN MID**

Client Sample ID: SS03 Lab Sample ID: 890-2409-3 Date Collected: 06/13/22 11:50 Matrix: Solid

Date Received: 06/13/22 15:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	27712	06/16/22 14:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	27743	06/17/22 16:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27838	06/17/22 16:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27671	06/16/22 09:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	27556	06/15/22 08:52	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27563	06/15/22 18:23	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	27509	06/15/22 12:53	SC	XEN MID
Soluble	Analysis	300.0		1			27702	06/17/22 18:23	CH	XEN MID

Client Sample ID: SS04 Lab Sample ID: 890-2409-4 Date Collected: 06/13/22 11:55 Matrix: Solid

Date Received: 06/13/22 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	27712	06/16/22 14:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	27743	06/17/22 16:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27838	06/17/22 16:19	AJ	XEN MID

Project/Site: Columbus Fed 021 & 022H CTB

SDG: 03D2024001

Client Sample ID: SS04

Client: Ensolum

Date Collected: 06/13/22 11:55 Date Received: 06/13/22 15:33 Lab Sample ID: 890-2409-4

Matrix: Solid

		Batch	Batch		Dil	Initial	Final	Batch	Prepared		
	Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
	Total/NA	Analysis	8015 NM		1			27671	06/16/22 09:49	AJ	XEN MID
	Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27556	06/15/22 08:52	DM	XEN MID
	Total/NA	Analysis	8015B NM		1			27563	06/15/22 18:46	AJ	XEN MID
	Soluble	Leach	DI Leach			5.03 g	50 mL	27509	06/15/22 12:53	SC	XEN MID
l	Soluble	Analysis	300.0		1			27702	06/17/22 18:32	CH	XEN MID

Client Sample ID: SS05 Lab Sample ID: 890-2409-5

Date Collected: 06/13/22 12:00 Date Received: 06/13/22 15:33

Matrix: Solid

Batch Dil Initial Final **Batch** Prepared Batch Method Amount Amount Number **Prep Type** Type Run **Factor** or Analyzed **Analyst** Lab Total/NA Prep 5035 27712 5.02 g 06/16/22 14:55 MR XEN MID 5 mL Total/NA Analysis 8021B 5 mL 5 mL 27743 06/17/22 17:06 MR XEN MID 1 Total/NA Analysis Total BTEX 1 27838 06/17/22 16:19 AJ XEN MID Total/NA 8015 NM 27671 06/16/22 09:49 AJ XEN MID Analysis Total/NA Prep 8015NM Prep 10.02 g 27556 06/15/22 08:52 DM XEN MID 10 mL Total/NA 8015B NM 27563 06/15/22 19:07 AJ XEN MID Analysis 1 06/15/22 12:53 SC Soluble Leach DI Leach 5.04 g 50 mL 27509 XEN MID

Client Sample ID: SS06 Lab Sample ID: 890-2409-6

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27702

06/17/22 18:41 CH

Date Collected: 06/13/22 12:05 Date Received: 06/13/22 15:33

Analysis

Soluble

300.0

Matrix: Solid

XEN MID

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	27712	06/16/22 14:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	27743	06/17/22 17:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27838	06/17/22 16:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27671	06/16/22 09:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	27556	06/15/22 08:52	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27563	06/15/22 19:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	27509	06/15/22 12:53	SC	XEN MID
Soluble	Analysis	300.0		1			27702	06/17/22 18:51	CH	XEN MID

Client Sample ID: SS07 Lab Sample ID: 890-2409-7 Date Collected: 06/13/22 12:45 **Matrix: Solid**

Date Received: 06/13/22 15:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	27712	06/16/22 14:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	27743	06/17/22 17:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27838	06/17/22 16:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27671	06/16/22 09:49	AJ	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.02 g	10 mL	27556 27563	06/15/22 08:52 06/15/22 19:51	DM AJ	XEN MID XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: Columbus Fed 021 & 022H CTB

Job ID: 890-2409-1
SDG: 03D2024001

Client Sample ID: SS07 Lab Sample ID: 890-2409-7

Date Collected: 06/13/22 12:45

Date Received: 06/13/22 15:33

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	27509	06/15/22 12:53	SC	XEN MID
Soluble	Analysis	300.0		5			27702	06/17/22 19:09	CH	XEN MID

Client Sample ID: SS08 Lab Sample ID: 890-2409-8

Date Collected: 06/13/22 12:50 Matrix: Solid

Date Received: 06/13/22 15:33

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	27712	06/16/22 14:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	27743	06/17/22 18:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			27838	06/17/22 16:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			27671	06/16/22 09:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	27556	06/15/22 08:52	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27563	06/15/22 20:12	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	27509	06/15/22 12:53	SC	XEN MID
Soluble	Analysis	300.0		1			27702	06/17/22 19:18	CH	XEN MID

Laboratory References:

Released to Imaging: 9/20/2022 11:45:39 AM

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

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Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Laboratory: Eurofins Midland

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

Authority Texas		ogram ELAP	Identification Number	Expiration Date 06-30-22
The following analyte the agency does not	•	ort, but the laboratory is n	not certified by the governing authority.	This list may include analytes for
Analysis Method	Prep Method	Matrix	Analyte	
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH	

Method Summary

Client: Ensolum

Project/Site: Columbus Fed 021 & 022H CTB

Job ID: 890-2409-1

SDG: 03D2024001

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum

Job ID: 890-2409-1 Project/Site: Columbus Fed 021 & 022H CTB SDG: 03D2024001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2409-1	SS01	Solid	06/13/22 11:40	06/13/22 15:33	0.5
890-2409-2	SS02	Solid	06/13/22 11:45	06/13/22 15:33	0.5
890-2409-3	SS03	Solid	06/13/22 11:50	06/13/22 15:33	0.5
890-2409-4	SS04	Solid	06/13/22 11:55	06/13/22 15:33	0.5
890-2409-5	SS05	Solid	06/13/22 12:00	06/13/22 15:33	0.5
890-2409-6	SS06	Solid	06/13/22 12:05	06/13/22 15:33	0.5
890-2409-7	SS07	Solid	06/13/22 12:45	06/13/22 15:33	0.5
890-2409-8	SS08	Solid	06/13/22 12:50	06/13/22 15:33	0.5

Circle Method(s) and

Total 200.7 / 6010

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Revised Date: 08/25/2020 Rev. 2020.2

eurofins Xenco **Environment Testing**

Chain of Custody

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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

17-643-2503 Email: Kizumi	Kizanijaus (G) eh selu M. Com Deliverables: EDD Deliverables:	ADaPT Other:
2HOR Turn Arou	ANALYSIS REQUEST	Preservative Codes
Due Da	Pres. Code	None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN
Temp Blank: Vss No Wet Ice: Yes No Wes No Was Temperature Reading: Yes No Was Temperature Reading: Yes No Was Corrected Temperature: Yes No Was Corrected Temperature: Yes No Was No Was Temperature Reading: Yes No Was Tempe	Parameters Orides 890-2409 Chain of Custody	H ₃ PO ₄ ; HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC
	BTE	Sample Comments
1140 05	X	Theident #: NAMP22038301851
1705		
V V 1250 V	A A A	
200.8 / 6020: 8RCRA 13PPM Texas 11 Metal(s) to be analyzed TCLP / SPLP 6010 : 8RC	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 TCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631/245.1	Ag SiO ₂ Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471
and relinquishment of samples constitutes a valid purchase order from client company able only for the cost of samples and shall not assume any responsibility for any losses rige of \$85.00 will be applied to each project and a charge of \$5 for each sample submit	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 lable 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 rige of \$55.00 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.	
Received by (Signature)	Date/Time Relinquiched by: (Signature) Received by: (Signature)	ture) Date/Time

SAMPLE RECEIPT

Cooler Custody Seals: amples Received Intact:

ample Custody Seals:

otal Containers:

Sample Identifica

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Sampler's Name:

roject Location: Project Number:

24 0 roject Name:

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City, State ZIP: Address: ompany Name:

roject Manager:

K9/6/ Ensidur

Company Name: Bill to: (if different)

Shicken

State of Project: Program:

UST/PST PRP Brownfields RRC

Superfund

Work Order Comments

www.xenco.com

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Work Order No:

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-2409-1

 SDG Number: 03D2024001

Login Number: 2409 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2409-1 SDG Number: 03D2024001

Login Number: 2409 **List Source: Eurofins Midland** List Creation: 06/15/22 11:11 AM List Number: 2

Creator: Rodriguez, Leticia

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	N/A	

<6mm (1/4").



Have a Question?

www.eurofinsus.com/Env

Released to Imaging: 9/20/2022 11:45:39 AM

Visit us at:

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2526-1

Laboratory Sample Delivery Group: 03D2024001 Client Project/Site: COLUMBUS 021H & 022H CTB

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMER

Authorized for release by: 7/14/2022 9:28:16 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: COLUMBUS 021H & 022H CTB

Laboratory Job ID: 890-2526-1 SDG: 03D2024001

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Definitions/Glossary

Job ID: 890-2526-1 Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB

SDG: 03D2024001

Qualifiers

GC VOA Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

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**

Detection Limit (DoD/DOE) DL

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)

Method Detection Limit MDL ML Minimum Level (Dioxin) Most Probable Number MPN Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NFG 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)

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2526-1

SDG: 03D2024001

Job ID: 890-2526-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2526-1

Receipt

The samples were received on 7/11/2022 10:26 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2° C

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike (MS) recoveries for preparation batch 880-29556 and analytical batch 880-29497 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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 Job ID: 890-2526-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: SS09

Lab Sample ID: 890-2526-1 Date Collected: 07/08/22 13:25 Matrix: Solid Date Received: 07/11/22 10:26

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/13/22 23:05	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/13/22 23:05	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/13/22 23:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/13/22 14:00	07/13/22 23:05	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/13/22 23:05	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/13/22 14:00	07/13/22 23:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			07/13/22 14:00	07/13/22 23:05	1
1,4-Difluorobenzene (Surr)	100		70 - 130			07/13/22 14:00	07/13/22 23:05	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/14/22 10:14	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<u> </u>	Result <50.0			Unit mg/Kg	<u>D</u>	Prepared	Analyzed 07/13/22 09:45	
Total TPH	<50.0	U			<u>D</u>	Prepared		
Total TPH Method: 8015B NM - Diesel Ran	<50.0	U			D	Prepared Prepared		1
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	<50.0	RO) (GC) Qualifier	50.0	mg/Kg			07/13/22 09:45	Dil Fac
Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.0 ge Organics (D	RO) (GC) Qualifier U	50.0	mg/Kg		Prepared	07/13/22 09:45 Analyzed	Dil Fac
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	<50.0 ge Organics (Di Result <50.0	U RO) (GC) Qualifier U	50.0 RL 50.0	mg/Kg Unit mg/Kg		Prepared 07/12/22 14:20	07/13/22 09:45 Analyzed 07/13/22 00:20	Dil Fac
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.0 ge Organics (Di Result <50.0 <50.0	U RO) (GC) Qualifier U U	50.0 RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/12/22 14:20 07/12/22 14:20	07/13/22 09:45 Analyzed 07/13/22 00:20 07/13/22 00:20	Dil Fac
Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.0 ge Organics (Di Result <50.0 <50.0 <50.0	U RO) (GC) Qualifier U U	50.0 RL 50.0 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/12/22 14:20 07/12/22 14:20 07/12/22 14:20	07/13/22 09:45 Analyzed 07/13/22 00:20 07/13/22 00:20 07/13/22 00:20	Dil Face 1 1 1 Dil Face
Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 %Recovery	U RO) (GC) Qualifier U U	50.0 RL 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/12/22 14:20 07/12/22 14:20 07/12/22 14:20 Prepared	07/13/22 09:45 Analyzed 07/13/22 00:20 07/13/22 00:20 07/13/22 00:20 Analyzed	Dil Fac
Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 %Recovery 89 93	U RO) (GC) Qualifier U U Qualifier	50.0 RL 50.0 50.0 50.0 Limits 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/12/22 14:20 07/12/22 14:20 07/12/22 14:20 Prepared 07/12/22 14:20	07/13/22 09:45 Analyzed 07/13/22 00:20 07/13/22 00:20 Analyzed 07/13/22 00:20	Dil Fac
Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 %Recovery 89 93 omatography -	U RO) (GC) Qualifier U U Qualifier	50.0 RL 50.0 50.0 50.0 Limits 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 07/12/22 14:20 07/12/22 14:20 07/12/22 14:20 Prepared 07/12/22 14:20	07/13/22 09:45 Analyzed 07/13/22 00:20 07/13/22 00:20 Analyzed 07/13/22 00:20	Dil Fac

Client Sample ID: SS10 Lab Sample ID: 890-2526-2

Date Collected: 07/08/22 13:35 Date Received: 07/11/22 10:26

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 23:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 23:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 23:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/13/22 23:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 23:25	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/13/22 23:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			07/13/22 14:00	07/13/22 23:25	1

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Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-2526-2

Client: Ensolum Job ID: 890-2526-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: SS10

Date Collected: 07/08/22 13:35 Date Received: 07/11/22 10:26

Sample Depth: 0.5

Method: 8021B - Volatile Organic Compo	ounds (GC)	(Continued)
motification to a gaine compa	Julius (33)	(Continuou,

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	99	70 - 130	07/13/22 14:00	07/13/22 23:25	1

ı	Mothodi	Total DTEV	- Total BTEX	Coloulation
ı	wethou.	TOTAL DIEV	- IUIAI DIEA	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/14/22 10:14	1

Method: 8015 NM - Diesel Range Organics	IUKU	11661

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/13/22 09:45	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 00:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 00:41	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 00:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	DII Fac
1-Chlorooctane	86		70 - 130	07/12/22 14:20	07/13/22 00:41	1
o-Terphenyl	90		70 - 130	07/12/22 14:20	07/13/22 00:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.81	4.99	mg/Kg			07/13/22 11:31	1

Client Sample ID: SS11 Lab Sample ID: 890-2526-3

Date Collected: 07/08/22 13:40 Date Received: 07/11/22 10:26

Sample Depth: 0.5

Mathadi 0004D	Valatile Overen	ic Compounds (GC)
Memoo: Auzib	- voianie Urdan	ic Compounds (GC)

mounda. our ib volutile orga	illo compoundo ((33)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/13/22 23:45	1
Toluene	< 0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/13/22 23:45	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/13/22 23:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/13/22 23:45	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/13/22 23:45	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/13/22 23:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			07/13/22 14:00	07/13/22 23:45	1
1,4-Difluorobenzene (Surr)	100		70 - 130			07/13/22 14:00	07/13/22 23:45	1

Method:	Total R	TFY - T	ntal RT	FX Calcu	ılation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	DII Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/14/22 10:14	1

	Method: 8015 NM - Diesel	Range Organics (DRO	D) (GC)	۱
ı	Michiga. 00 to Min - Diese	i italige Organics (Ditt		,

Analyte	•	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH		 <50.0	U	50.0	mg/Kg		-	07/13/22 09:45	1

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Matrix: Solid

Client: Ensolum Job ID: 890-2526-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: SS11 Lab Sample ID: 890-2526-3 Date Collected: 07/08/22 13:40 Matrix: Solid Date Received: 07/11/22 10:26

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 01:24	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 01:24	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 01:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			07/12/22 14:20	07/13/22 01:24	1
o-Terphenyl	96		70 - 130			07/12/22 14:20	07/13/22 01:24	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 890-2526-4 **Client Sample ID: SS12** Date Collected: 07/08/22 13:45 Matrix: Solid

Date Received: 07/11/22 10:26

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 00:06	
Toluene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 00:06	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 00:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 00:06	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 00:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 00:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/13/22 14:00	07/14/22 00:06	1
1,4-Difluorobenzene (Surr)	98		70 - 130			07/13/22 14:00	07/14/22 00:06	1
Method: Total BTEX - Total BTEX	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/14/22 10:14	1
•		· ·	0.0000	9/.19			*******	
Method: 8015 NM - Diesel Range	Organics (DR		0.0000	99				
- -	•		RL	Unit	D	Prepared	Analyzed	Dil Fac
: Method: 8015 NM - Diesel Range	•	O) (GC)			<u>D</u>	Prepared		Dil Fac
Method: 8015 NM - Diesel Range Analyte	Result 19.4	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	
Method: 8015 NM - Diesel Range Analyte Total TPH	Result 19.4 ge Organics (D	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared Prepared	Analyzed	1
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Rang	Result 19.4 ge Organics (D	O) (GC) Qualifier RO) (GC) Qualifier	RL 50.0	Unit mg/Kg			Analyzed 07/13/22 09:45	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 19.4 ge Organics (D Result	O) (GC) Qualifier RO) (GC) Qualifier		Unit mg/Kg		Prepared	Analyzed 07/13/22 09:45	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10	Result 19.4 ge Organics (D Result <50.0	Qualifier RO) (GC) Qualifier U	RL 50.0	Unit mg/Kg Unit mg/Kg		Prepared 07/12/22 14:20	Analyzed 07/13/22 09:45 Analyzed 07/13/22 01:46	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 19.4 ge Organics (D) Result < 50.0 19.4	O) (GC) Qualifier RO) (GC) Qualifier U	RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 07/12/22 14:20 07/12/22 14:20	Analyzed 07/13/22 09:45 Analyzed 07/13/22 01:46 07/13/22 01:46	1 Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 19.4 ge Organics (D) Result < 50.0 19.4 < 50.0	O) (GC) Qualifier RO) (GC) Qualifier U	RL 50.0 RL 50.0 50.0 50.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 07/12/22 14:20 07/12/22 14:20 07/12/22 14:20	Analyzed 07/13/22 09:45 Analyzed 07/13/22 01:46 07/13/22 01:46	1 Dil Fac

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7/14/2022

Client Sample Results

Client: Ensolum Job ID: 890-2526-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: SS12 Lab Sample ID: 890-2526-4

Date Collected: 07/08/22 13:45

Matrix: Solid

Date Received: 07/11/22 10:26 Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - SolubleAnalyteResult ChlorideQualifierRL QualifierUnit mg/KgD Prepared Pre

5

6

8

10

12

13

114

Surrogate Summary

Client: Ensolum Job ID: 890-2526-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2526-1	SS09	104	100	
890-2526-1 MS	SS09	101	99	
890-2526-1 MSD	SS09	103	99	
890-2526-2	SS10	99	99	
890-2526-3	SS11	106	100	
890-2526-4	SS12	103	98	
LCS 880-29670/1-A	Lab Control Sample	96	97	
LCSD 880-29670/2-A	Lab Control Sample Dup	101	96	
MB 880-29558/5-A	Method Blank	96	99	
MB 880-29670/5-A	Method Blank	95	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)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2526-1	SS09	89	93	
890-2526-2	SS10	86	90	
890-2526-3	SS11	87	96	
390-2526-4	SS12	104	102	
390-2527-A-1-C MS	Matrix Spike	81	78	
890-2527-A-1-D MSD	Matrix Spike Duplicate	80	80	
_CS 880-29556/2-A	Lab Control Sample	99	109	
_CSD 880-29556/3-A	Lab Control Sample Dup	95	101	
MB 880-29556/1-A	Method Blank	112	117	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-2526-1 Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-29558/5-A

Matrix: Solid Analysis Batch: 29611 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29558

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1

MB MB

MR MR

<0.00200 U

<0.00200 U

Result Qualifier

Surrogate	%Recovery	Qualifier	Limits	Prepai	red	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	07/12/22	14:57	07/13/22 10:58	1
1,4-Difluorobenzene (Surr)	99		70 - 130	07/12/22	14:57	07/13/22 10:58	1

Lab Sample ID: MB 880-29670/5-A

Matrix: Solid

Analyte

Benzene

Toluene

Analysis Batch: 29611

Client Sample ID: Method Blank

Analyzed

07/13/22 22:36

07/13/22 22:36

Prepared

07/13/22 14:00

07/13/22 14:00

Prep Type: Total/NA

Prep Batch: 29670

Dil Fac

Ethylbenzene <0.00200 U 0.00200 mg/Kg 07/13/22 14:00 07/13/22 22:36 07/13/22 14:00 07/13/22 22:36 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 07/13/22 22:36 o-Xylene <0.00200 U 0.00200 mg/Kg 07/13/22 14:00 Xylenes, Total <0.00400 U 0.00400 07/13/22 14:00 07/13/22 22:36 mg/Kg

RL

0.00200

0.00200

Unit

mg/Kg

mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Pi	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	07/1	3/22 14:00	07/13/22 22:36	1
1,4-Difluorobenzene (Surr)	94		70 - 130	07/1.	3/22 14:00	07/13/22 22:36	1

Lab Sample ID: LCS 880-29670/1-A

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 29670

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.09248 mg/Kg 92 70 - 130 Toluene 0.100 0.08671 mg/Kg 87 70 - 130 Ethylbenzene 0.100 0.08569 mg/Kg 86 70 - 130 m-Xylene & p-Xylene 0.200 0.1808 mg/Kg 90 70 - 130 0.100 0.09740 70 - 130 o-Xylene mg/Kg 97

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	96	70 _ 130
1.4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: LCSD 880-29670/2-A

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 29670

	Spike	LCSD LCSD				%Rec		KPD	
Analyte	Added	Result Qualif	ier Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08878	mg/Kg		89	70 - 130	4	35	

QC Sample Results

Client: Ensolum Job ID: 890-2526-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

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

Lab Sample ID: LCSD 880-29670/2-A

Matrix: Solid

Analysis Batch: 29611

85

mg/Kg

mg/Kg

70 - 130

70 - 130

Prep Type: Total/NA Prep Batch: 29670

Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.100	0.09243		mg/Kg		92	70 - 130	6	35
0.100	0.09135		mg/Kg		91	70 - 130	6	35
0.200	0.1932		mg/Kg		97	70 - 130	7	35
0.100	0.1042		mg/Kg		104	70 - 130	7	35
	Added 0.100 0.100 0.200	Added Result 0.100 0.09243 0.100 0.09135 0.200 0.1932	Added Result Qualifier 0.100 0.09243 0.100 0.09135 0.200 0.1932	Added Result 0.100 Qualifier 0.09243 Unit mg/Kg mg/Kg 0.100 0.09135 mg/Kg 0.200 0.1932 mg/Kg	Added Result Qualifier Unit D 0.100 0.09243 mg/Kg 0.100 0.09135 mg/Kg 0.200 0.1932 mg/Kg	Added Result Qualifier Unit D %Rec 0.100 0.09243 mg/Kg 92 0.100 0.09135 mg/Kg 91 0.200 0.1932 mg/Kg 97	Added Result Qualifier Unit D %Rec Limits 0.100 0.09243 mg/Kg 92 70 - 130 0.100 0.09135 mg/Kg 91 70 - 130 0.200 0.1932 mg/Kg 97 70 - 130	Added Result Qualifier Unit D %Rec Limits RPD 0.100 0.09243 mg/Kg 92 70 - 130 6 0.100 0.09135 mg/Kg 91 70 - 130 6 0.200 0.1932 mg/Kg 97 70 - 130 7

LCSD LCSD

<0.00402 U

<0.00201 U

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-2526-1 MS

Matrix: Solid

m-Xylene & p-Xylene

o-Xylene

Analysis Batch: 29611

Client Sample ID: SS09 Prep Type: Total/NA

Prep Batch: 29670

MS MS %Rec Sample Sample Spike Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits Benzene <0.00201 0.0998 0.09321 93 70 - 130 mg/Kg Toluene <0.00201 U 0.0998 0.08250 83 70 - 130 mg/Kg Ethylbenzene <0.00201 U 0.0998 0.08098 70 - 130 mg/Kg 81

0.1700

0.09364

0.200

0.0998

MS MS

Surrogate	%Recovery Qualif	ier Limits
4-Bromofluorobenzene (Surr)	101	70 - 130
1.4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: 890-2526-1 MSD

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: SS09

Prep Type: Total/NA

Prep Batch: 29670

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	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0994	0.08758	-	mg/Kg		88	70 - 130	6	35
Toluene	<0.00201	U	0.0994	0.08365		mg/Kg		84	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.0994	0.08315		mg/Kg		84	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1762		mg/Kg		89	70 - 130	4	35
o-Xylene	<0.00201	U	0.0994	0.09699		mg/Kg		98	70 - 130	4	35
The state of the s											

MSD MSD

Surrogate	76Kecovery	Qualifier	LIIIIII
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-29556/1-A

Matrix: Solid

Analysis Batch: 29497

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

Prep Batch: 29556

мв мв Result Qualifier RL Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 07/12/22 14:20 07/12/22 19:42 (GRO)-C6-C10

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2526-1

SDG: 03D2024001

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

Lab Sample ID: MB 880-29556/1-A

Lab Sample ID: LCS 880-29556/2-A

Matrix: Solid

Analysis Batch: 29497

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29556

	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 19:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 19:42	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	07/12/22 14:20	07/12/22 19:42	1
o-Terphenyl	117		70 - 130	07/12/22 14:20	07/12/22 19:42	1

Client Sample ID: Lab Control Sample

Matrix: Solid Prep Type: Total/NA Analysis Batch: 29497 Prep Batch: 29556 LCS LCS Spike

Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1074 107 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 917.3 mg/Kg 92 70 - 130 C10-C28)

LCS LCS

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

Lab Sample ID: LCSD 880-29556/3-A

Matrix: Solid

Analysis Batch: 29497

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

Prep Batch: 29556

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	951.6		mg/Kg		95	70 - 130	12	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	889.0		mg/Kg		89	70 - 130	3	20	
C10-C28)										

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 95 70 - 130 o-Terphenyl 101 70 - 130

Lab Sample ID: 890-2527-A-1-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 29497

Prep Type: Total/NA Prep Batch: 29556

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	996	887.1		mg/Kg		89	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U F1	996	682.2	F1	mg/Kg		68	70 - 130	
040,000)										

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	78		70 - 130

Job ID: 890-2526-1 Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

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

Lab Sample ID: 890-2527-A-1-D MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 29497

Prep Batch: 29556 Sample Sample MSD MSD RPD Spike Result Qualifier Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Gasoline Range Organics <49.9 U 998 881.1 mg/Kg 88 70 - 130 20 (GRO)-C6-C10 998 708 4 71 70 - 130Diesel Range Organics (Over <49.9 U F1 mg/Kg 20

C10-C28)

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-29459/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 29599

MB MB

Result Qualifier RL Unit Analyte D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 07/13/22 09:28

Lab Sample ID: LCS 880-29459/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 29599

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 90 - 110 241.0 mg/Kg

Lab Sample ID: LCSD 880-29459/3-A

Matrix: Solid

Analysis Batch: 29599

Spike LCSD LCSD RPD %Rec Analyte Added Result Qualifier Unit %Rec RPD Limit Chloride 250 243.1 97 90 - 110 mg/Kg

Lab Sample ID: 890-2526-1 MS

Matrix: Solid

Analysis Batch: 29599

Sample Sample Spike MS MS %Rec Qualifier Added Qualifier Analyte Result Result Unit %Rec Limits Chloride <5.02 U 251 97 90 - 110 246.7 mg/Kg

Lab Sample ID: 890-2526-1 MSD

Matrix: Solid

Analysis Batch: 29599

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added RPD Analyte Result Qualifier %Rec Limits Limit Unit D Chloride 251 <5.02 U 251.3 90 - 110 20 mg/Kg

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Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Client Sample ID: SS09

Client Sample ID: SS09

Prep Type: Soluble

Prep Type: Soluble

Client: Ensolum

Job ID: 890-2526-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

GC VOA

Prep Batch: 29558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-29558/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 29611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-1	SS09	Total/NA	Solid	8021B	29670
890-2526-2	SS10	Total/NA	Solid	8021B	29670
890-2526-3	SS11	Total/NA	Solid	8021B	29670
890-2526-4	SS12	Total/NA	Solid	8021B	29670
MB 880-29558/5-A	Method Blank	Total/NA	Solid	8021B	29558
MB 880-29670/5-A	Method Blank	Total/NA	Solid	8021B	29670
LCS 880-29670/1-A	Lab Control Sample	Total/NA	Solid	8021B	29670
LCSD 880-29670/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29670
890-2526-1 MS	SS09	Total/NA	Solid	8021B	29670
890-2526-1 MSD	SS09	Total/NA	Solid	8021B	29670

Prep Batch: 29670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-1	SS09	Total/NA	Solid	5035	
890-2526-2	SS10	Total/NA	Solid	5035	
890-2526-3	SS11	Total/NA	Solid	5035	
890-2526-4	SS12	Total/NA	Solid	5035	
MB 880-29670/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29670/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29670/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2526-1 MS	SS09	Total/NA	Solid	5035	
890-2526-1 MSD	SS09	Total/NA	Solid	5035	

Analysis Batch: 29740

Lab S	Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2	2526-1	SS09	Total/NA	Solid	Total BTEX	
890-2	2526-2	SS10	Total/NA	Solid	Total BTEX	
890-2	2526-3	SS11	Total/NA	Solid	Total BTEX	
890-2	2526-4	SS12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 29497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-1	SS09	Total/NA	Solid	8015B NM	29556
890-2526-2	SS10	Total/NA	Solid	8015B NM	29556
90-2526-3 SS11		Total/NA	Solid	8015B NM	29556
890-2526-4 SS12		Total/NA	Solid	8015B NM	29556
MB 880-29556/1-A	Method Blank	Total/NA	Solid	8015B NM	29556
LCS 880-29556/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	29556
LCSD 880-29556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	29556
890-2527-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	29556
890-2527-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	29556

Prep Batch: 29556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-1	SS09	Total/NA	Solid	8015NM Prep	

 Client: Ensolum
 Job ID: 890-2526-1

 Project/Site: COLUMBUS 021H & 022H CTB
 SDG: 03D2024001

GC Semi VOA (Continued)

Prep Batch: 29556 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-2	SS10	Total/NA	Solid	8015NM Prep	
890-2526-3	SS11	Total/NA	Solid	8015NM Prep	
890-2526-4	SS12	Total/NA	Solid	8015NM Prep	
MB 880-29556/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-29556/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-29556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2527-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2527-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 29632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-1	SS09	Total/NA	Solid	8015 NM	
890-2526-2	SS10	Total/NA	Solid	8015 NM	
890-2526-3	SS11	Total/NA	Solid	8015 NM	
890-2526-4	SS12	Total/NA	Solid	8015 NM	

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Leach Batch: 29459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-1	SS09	Soluble	Solid	DI Leach	
890-2526-2	SS10	Soluble	Solid	DI Leach	
890-2526-3	SS11	Soluble	Solid	DI Leach	
890-2526-4	SS12	Soluble	Solid	DI Leach	
MB 880-29459/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-29459/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-29459/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2526-1 MS	SS09	Soluble	Solid	DI Leach	
890-2526-1 MSD	SS09	Soluble	Solid	DI Leach	

Analysis Batch: 29599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2526-1	SS09	Soluble	Solid	300.0	29459
890-2526-2	SS10	Soluble	Solid	300.0	29459
890-2526-3	SS11	Soluble	Solid	300.0	29459
890-2526-4	SS12	Soluble	Solid	300.0	29459
MB 880-29459/1-A	Method Blank	Soluble	Solid	300.0	29459
LCS 880-29459/2-A	Lab Control Sample	Soluble	Solid	300.0	29459
LCSD 880-29459/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	29459
890-2526-1 MS	SS09	Soluble	Solid	300.0	29459
890-2526-1 MSD	SS09	Soluble	Solid	300.0	29459

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Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2526-1 SDG: 03D2024001

Client Sample ID: SS09 Lab Sample ID: 890-2526-1

Date Collected: 07/08/22 13:25 Matrix: Solid Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/13/22 23:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29740	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29632	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 00:20	SM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 10:04	CH	XEN MID

Client Sample ID: SS10 Lab Sample ID: 890-2526-2

Date Collected: 07/08/22 13:35 Matrix: Solid

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/13/22 23:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29740	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29632	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 00:41	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 11:31	CH	XEN MID

Client Sample ID: SS11 Lab Sample ID: 890-2526-3

Date Collected: 07/08/22 13:40 Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/13/22 23:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29740	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29632	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 01:24	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 11:39	CH	XEN MID

Client Sample ID: SS12 Lab Sample ID: 890-2526-4

Date Collected: 07/08/22 13:45 Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 00:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29740	07/14/22 10:14	SM	XEN MID

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Matrix: Solid

Matrix: Solid

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Lab Chronicle

Client: Ensolum Job ID: 890-2526-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: SS12 Lab Sample ID: 890-2526-4 Date Collected: 07/08/22 13:45

Matrix: Solid

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			29632	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 01:46	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 11:47	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2526-1 Project/Site: COLUMBUS 021H & 022H CTB

SDG: 03D2024001

Laboratory: Eurofins Midland

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

Authority Texas		ogram	Identification Number	Expiration Date
		ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	• •	t the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

Method Summary

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2526-1

SDG: 03D2024001

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
800.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
Ol Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

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Sample Summary

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2526-1

SDG: 03D2024001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2526-1	SS09	Solid	07/08/22 13:25	07/11/22 10:26	0.5
890-2526-2	SS10	Solid	07/08/22 13:35	07/11/22 10:26	0.5
890-2526-3	SS11	Solid	07/08/22 13:40	07/11/22 10:26	0.5
890-2526-4	SS12	Solid	07/08/22 13:45	07/11/22 10:26	0.5

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Environment Testing Xenco

601 N Marienfeld St Suite 400

State of Project:

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

Work Order Comments

601 N Marienfeld St Suite 400

Project Manager:

Company Name: ddress:

> Ensolum, LLC Kalei Jennings

> > Bill to: (if different)

Company Name:

Ensolum, LLC Kalei Jennigns

Chain of Custody

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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

					Reporting: Level III PST/UST TRRP	PST/UST TRRP Level V
-	City, State ZIP:	Midian	Midland, IX /9/01		A Cook	
Email: k	Email: kjennings@ensolum.com	lum.com			Deliverables: EDD	ADaPT LI Other:
Columbus 021H & 022H CTB Turn Around	round			ANALYSIS RE	EQUEST	Preservative Codes
☐ Routine	☑ Rush c	Pres. Code				None: NO DI Water: H ₂ O
Due Date:	3 Day TAT					Cool: Cool MeOH: Me
TAT starts the day received by	ay received by					
the lab, if received by 4:30pm	-	rs				H ₂ S0 ₄ : H ₂ NaOH: Na
res No Wet ice:	Res No	nete .0)				H₃PO₄: HP
Thermometer ID:	408-17				Millian million million	NaHSO ₄ : NABIS
Correction Factor:				890-2520 Citation		Na ₂ S ₂ O ₃ : NaSO ₃
Temperature Reading:	15.2	S (E		-	_	Zn Acetate+NaOH: Zn
Corrected Temperature:	5.0	IDE				NaOH+Ascorbic Acid: SAPC
Date Time I	Depth Grab/ #	# of Cont CHLOF	TPH (8			Sample Comments
07.08.22 1325 0	0.5' G	1 ×	×			
07.08.22 1335 0	0.5' G	-1 ×	×			
07.08.22 1340 0	0.5' G	×	×			
07.08.22 1345 0	0.5' G	×	×			
\						
8RCRA 13PPM	Texas 11	Al Sb As	Ва Ве	Cd Ca Cr Co Cu Fe Pl	K Se	
TCLP / SP	TCLP / SPLP 6010: 8RCRA	RA Sb As Ba	Be	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		Hg: 1631 / 245.1 / 7470 / 7471
s constitutes a valid pu	rchase order from c	lient company	to Eurofins Xen	ico, its affiliates and subcontracto	rs. It assigns standard terms and cond	ditions
each project and a cha	re any responsibility rge of \$6 for each sa	for any losse ample submitt	s or expenses ir ed to Eurofins X	ncurred by the client if such losse enco, but not analyzed. These ten	s are due to circumstances beyond the ms will be enforced unless previously n	control regotiated.
aived by: (Signatu	re)	Date/1	Time	Relinquished by: (Signa	ature) Received by: (Signature)	(Signature) Date/Time
D. 1 6 6 0	rs and shall not assure that hope to have the hope to the hope to have the hope the hope to have the hope the	miniples constituties a valid purchase order from commissions samples and shall not assume any responsibility led to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to each project and a charge of \$5 for each steed to eac	constitutes a valid purchase order from client company sand shall not assume any responsibility for any losse sach project and a charge of \$6 for each sample submitted by: (Signature)	constitutes a valid purchase order from cliefic company to Euronias Actives and shall not assume any responsibility for any losses or expenses in sach project and a charge of \$6 for each sample submitted to Eurofins X losses of the control of the control of the control of the constitution of the constitut	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from citeric company to Eurotins Action, its animates and shall not assume any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses incurred by the client if such orders are any responsibility for any tosses or expenses are any tosses or expense	rms will be enforced

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2526-1 SDG Number: 03D2024001

Login Number: 2526 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

Login Sample Receipt Checklist

Client: Ensolum Job N

Job Number: 890-2526-1 SDG Number: 03D2024001

Login Number: 2526
List Source: Eurofins Midland
List Number: 2
List Creation: 07/12/22 11:11 AM

Creator: Rodriguez, Leticia

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	N/A	

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<6mm (1/4").

Released to Imaging: 9/20/2022 11:45:39 AM

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2527-1

Laboratory Sample Delivery Group: 03D2024001 Client Project/Site: COLUMBUS 021H & 022H CTB

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMER

Authorized for release by: 7/14/2022 9:28:16 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum Laboratory Job ID: 890-2527-1 Project/Site: COLUMBUS 021H & 022H CTB

SDG: 03D2024001

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Definitions/Glossary

Job ID: 890-2527-1 Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Qualifiers

GC VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

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**

Detection Limit (DoD/DOE) DL

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) Most Probable Number MPN MQL Method Quantitation Limit

Not Calculated NC

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)

Relative Percent Difference, a measure of the relative difference between two points RPD

Toxicity Equivalent Factor (Dioxin) TEF TEQ Toxicity Equivalent Quotient (Dioxin)

Released to Imaging: 9/20/2022 11:45:39 AM

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2527-1

SDG: 03D2024001

Job ID: 890-2527-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2527-1

Receipt

The samples were received on 7/11/2022 10:26 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike (MS) recoveries for preparation batch 880-29556 and analytical batch 880-29497 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

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Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-2527-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: FS01 Lab Sample ID: 890-2527-1

Date Collected: 07/07/22 14:40
Date Received: 07/11/22 10:26

Sample Depth: 0.75

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 00:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:26	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 00:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			07/13/22 14:00	07/14/22 00:26	1
1,4-Difluorobenzene (Surr)	98		70 - 130			07/13/22 14:00	07/14/22 00:26	1
Method: Total BTEX - Total BTE	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/14/22 10:14	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/13/22 09:45	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	
								Dil Fac
5 5	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 20:46	
(GRO)-C6-C10	<49.9 <49.9		49.9 49.9	mg/Kg mg/Kg		07/12/22 14:20 07/12/22 14:20	07/12/22 20:46 07/12/22 20:46	1
(GRO)-C6-C10 Diesel Range Organics (Over		U F1						1
C10-C28)	<49.9	U F1	49.9	mg/Kg		07/12/22 14:20	07/12/22 20:46	1 1
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<49.9 <49.9	U F1	49.9 49.9	mg/Kg		07/12/22 14:20 07/12/22 14:20	07/12/22 20:46 07/12/22 20:46	1 1 1 Dil Fac
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 <49.9 %Recovery	U F1	49.9 49.9 <i>Limits</i>	mg/Kg		07/12/22 14:20 07/12/22 14:20 Prepared	07/12/22 20:46 07/12/22 20:46 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<49.9 <49.9 	U F1 U Qualifier	49.9 49.9 Limits 70 - 130	mg/Kg		07/12/22 14:20 07/12/22 14:20 Prepared 07/12/22 14:20	07/12/22 20:46 07/12/22 20:46 Analyzed 07/12/22 20:46	Dil Fac
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	<49.9 <49.9 **Recovery 98 108 omatography -	U F1 U Qualifier	49.9 49.9 Limits 70 - 130	mg/Kg	D	07/12/22 14:20 07/12/22 14:20 Prepared 07/12/22 14:20	07/12/22 20:46 07/12/22 20:46 Analyzed 07/12/22 20:46	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Client Sample ID: FS02 Lab Sample ID: 890-2527-2

Date Collected: 07/07/22 14:45 Date Received: 07/11/22 10:26

Sample Depth: 0.75

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		07/13/22 14:00	07/14/22 00:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 00:47	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		07/13/22 14:00	07/14/22 00:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/13/22 14:00	07/14/22 00:47	1

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Matrix: Solid

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Matrix: Solid

Client: Ensolum

Job ID: 890-2527-1 SDG: 03D2024001 Project/Site: COLUMBUS 021H & 022H CTB

Client Sample ID: FS02 Lab Sample ID: 890-2527-2

Date Collected: 07/07/22 14:45 Date Received: 07/11/22 10:26

Sample Depth: 0.75

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	92	70 - 130	07/13/22 14:00	07/14/22 00:47	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401 U	0.00401	ma/Ka			07/14/22 10:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/13/22 09:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 21:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 21:50	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 21:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91	70 - 130	07/12/22 14:20	07/12/22 21:50	1
o-Terphenyl	100	70 - 130	07/12/22 14:20	07/12/22 21:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.2		5.05	mg/Kg			07/13/22 12:18	1

Lab Sample ID: 890-2527-3 **Client Sample ID: FS03**

Date Collected: 07/07/22 14:50 Date Received: 07/11/22 10:26

Sample Depth: 0.75

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:07	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 01:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:07	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 01:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/13/22 14:00	07/14/22 01:07	1
1,4-Difluorobenzene (Surr)	98		70 - 130			07/13/22 14:00	07/14/22 01:07	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	KL	Unit	D	Prepared	Analyzed	DII Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/14/22 10:14	1

Analyte	Result 0	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 L	U	49.9	mg/Kg			07/13/22 09:45	1

Eurofins Carlsbad

Matrix: Solid

Job ID: 890-2527-1 SDG: 03D2024001

Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB

Client Sample ID: FS03 Lab Sample ID: 890-2527-3

Date Collected: 07/07/22 14:50 Matrix: Solid Date Received: 07/11/22 10:26

Sample Depth: 0.75

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 22:11	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 22:11	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 22:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			07/12/22 14:20	07/12/22 22:11	1
o-Terphenyl	96		70 - 130			07/12/22 14:20	07/12/22 22:11	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.1		5.04	mg/Kg			07/13/22 12:26	1

Lab Sample ID: 890-2527-4 **Client Sample ID: FS04** Matrix: Solid

Date Collected: 07/07/22 14:55 Date Received: 07/11/22 10:26

Sample Depth: 0.75

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 01:27	1
Toluene	< 0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 01:27	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 01:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 01:27	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 01:27	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 01:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			07/13/22 14:00	07/14/22 01:27	1
1,4-Difluorobenzene (Surr)	95		70 - 130			07/13/22 14:00	07/14/22 01:27	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/14/22 10:14	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/13/22 09:45	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC) - I	RA4					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 22:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 22:33	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 22:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			07/12/22 14:20	07/12/22 22:33	1
o-Terphenyl	91		70 - 130			07/12/22 14:20	07/12/22 22:33	1

Matrix: Solid

Job ID: 890-2527-1

Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: FS04 Lab Sample ID: 890-2527-4

Date Collected: 07/07/22 14:55 Matrix: Solid Date Received: 07/11/22 10:26

Sample Depth: 0.75

Method: 300.0 - Anions, Ion Chroma	tography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.9		4.97	mg/Kg			07/13/22 14:16	1

Client Sample ID: FS05 Lab Sample ID: 890-2527-5

Date Collected: 07/07/22 15:00 Date Received: 07/11/22 10:26

Sample Depth: 0.75

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:48	
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:48	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:48	
m-Xylene & p-Xylene	< 0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 01:48	
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 01:48	•
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 01:48	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	102		70 - 130			07/13/22 14:00	07/14/22 01:48	
1,4-Difluorobenzene (Surr)	94		70 - 130			07/13/22 14:00	07/14/22 01:48	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/14/22 10:14	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/13/22 09:45	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 22:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 22:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 22:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130			07/12/22 14:20	07/12/22 22:54	1
o-Terphenyl	96		70 - 130			07/12/22 14:20	07/12/22 22:54	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client: Ensolum

Job ID: 890-2527-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: FS06 Lab Sample ID: 890-2527-6

Date Collected: 07/07/22 15:05 Matrix: Solid Date Received: 07/11/22 10:26

Sample Depth: 0.75

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 02:08	
Toluene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 02:08	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 02:08	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 02:08	
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 02:08	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 02:08	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	109		70 - 130			07/13/22 14:00	07/14/22 02:08	
1,4-Difluorobenzene (Surr)	97		70 - 130			07/13/22 14:00	07/14/22 02:08	
Method: Total BTEX - Total BTEX	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/14/22 10:14	
Analyte Total TPH	<50.0	Qualifier U	RL 50.0	Unit mg/Kg	D	Prepared	Analyzed 07/13/22 09:45	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			07/13/22 09:45	
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 23:16	
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 23:16	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 23:16	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	90		70 - 130			07/12/22 14:20	07/12/22 23:16	
o-Terphenyl	95		70 - 130			07/12/22 14:20	07/12/22 23:16	
Method: 300.0 - Anions, Ion Chro	0 . ,							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
				mg/Kg				

Client Sample ID: FS07 Lab Sample ID: 890-2527-7

Date Collected: 07/08/22 13:15 Date Received: 07/11/22 10:26

Sample Depth: 0.75

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 03:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 03:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 03:58	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		07/13/22 14:00	07/14/22 03:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 03:58	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		07/13/22 14:00	07/14/22 03:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			07/13/22 14:00	07/14/22 03:58	

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Matrix: Solid

Project/Site: COLUMBUS 021H & 022H CTB

Client: Ensolum

Job ID: 890-2527-1

SDG: 03D2024001

Client Sample ID: FS07

Date Collected: 07/08/22 13:15 Date Received: 07/11/22 10:26

Matrix: Solid

Lab Sample ID: 890-2527-7

Sample Depth: 0.75

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

Surrogate	%Recovery Qualifi	er Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	96	70 - 130	07/13/22 14:00	07/14/22 03:58	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			07/14/22 10:14	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	ma/Ka			07/13/22 09:45	1

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

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 23:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 23:37	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 23:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	07.	7/12/22 14:20	07/12/22 23:37	1
o-Terphenyl	97		70 - 130	07.	7/12/22 14:20	07/12/22 23:37	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.1	5.01	mg/Kg			07/13/22 14:40	1

Client Sample ID: FS08 Lab Sample ID: 890-2527-8

Date Collected: 07/08/22 13:20 Date Received: 07/11/22 10:26

Sample Depth: 0.75

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 04:18	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 04:18	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 04:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/13/22 14:00	07/14/22 04:18	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 04:18	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/13/22 14:00	07/14/22 04:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			07/13/22 14:00	07/14/22 04:18	1
1,4-Difluorobenzene (Surr)	94		70 - 130			07/13/22 14:00	07/14/22 04:18	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402	ma/Ka			07/14/22 10:14	1

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

Analyte	Result 0	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 L	U	49.9	mg/Kg			07/13/22 09:45	1

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Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-2527-8

Client Sample Results

Client: Ensolum Job ID: 890-2527-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: FS08

Date Collected: 07/08/22 13:20 Date Received: 07/11/22 10:26

Sample Depth: 0.75

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 23:59	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 23:59	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/12/22 23:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			07/12/22 14:20	07/12/22 23:59	1
o-Terphenyl	112		70 - 130			07/12/22 14:20	07/12/22 23:59	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Surrogate Summary

Client: Ensolum Job ID: 890-2527-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance L
		BFB1	DFBZ1	
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2526-A-1-F MS	Matrix Spike	101	99	
90-2526-A-1-G MSD	Matrix Spike Duplicate	103	99	
390-2527-1	FS01	107	98	
90-2527-2	FS02	103	92	
390-2527-3	FS03	103	98	
390-2527-4	FS04	110	95	
390-2527-5	FS05	102	94	
390-2527-6	FS06	109	97	
90-2527-7	FS07	102	96	
90-2527-8	FS08	99	94	
CS 880-29670/1-A	Lab Control Sample	96	97	
.CSD 880-29670/2-A	Lab Control Sample Dup	101	96	
/IB 880-29558/5-A	Method Blank	96	99	
MB 880-29670/5-A	Method Blank	95	94	
Surrogate Legend				
BFB = 4-Bromofluorober	nzene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2527-1	FS01	98	108	
390-2527-1 MS	FS01	81	78	
890-2527-1 MSD	FS01	80	80	
390-2527-2	FS02	91	100	
390-2527-3	FS03	92	96	
890-2527-4 - RA4	FS04	84	91	
390-2527-5	FS05	94	96	
390-2527-6	FS06	90	95	
390-2527-7	FS07	88	97	
390-2527-8	FS08	105	112	
_CS 880-29556/2-A	Lab Control Sample	99	109	
LCSD 880-29556/3-A	Lab Control Sample Dup	95	101	
MB 880-29556/1-A	Method Blank	112	117	

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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Released to Imaging: 9/20/2022 11:45:39 AM

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4.0

12

Client: Ensolum Job ID: 890-2527-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-29558/5-A

Matrix: Solid Analysis Batch: 29611 Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 29558

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Xylenes, Total	< 0.00399	U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1

MB MB Qualifier Surrogate %Recovery Limits Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 70 - 130 07/12/22 14:57 07/13/22 10:58 96 99 70 - 130 07/12/22 14:57 07/13/22 10:58 1,4-Difluorobenzene (Surr)

Lab Sample ID: MB 880-29670/5-A

Matrix: Solid

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

Analysis Batch: 29611 Prep Batch: 29670

	1110	IND						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 22:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 22:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 22:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/13/22 14:00	07/13/22 22:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/13/22 22:36	1
Xvlenes, Total	< 0.00400	U	0.00400	ma/Ka		07/13/22 14:00	07/13/22 22:36	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Pi	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	07/1	3/22 14:00	07/13/22 22:36	1
1,4-Difluorobenzene (Surr)	94		70 - 130	07/1.	3/22 14:00	07/13/22 22:36	1

Lab Sample ID: LCS 880-29670/1-A

Matrix: Solid

Analysis Batch: 29611

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

Prep Batch: 29670

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09248		mg/Kg		92	70 - 130	
Toluene	0.100	0.08671		mg/Kg		87	70 - 130	
Ethylbenzene	0.100	0.08569		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	0.200	0.1808		mg/Kg		90	70 - 130	
o-Xylene	0.100	0.09740		mg/Kg		97	70 - 130	

LCS LCS %Pacayary Qualifier I imite

Surrogate	%Recovery	Quaimer	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-29670/2-A

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Lab	Control Sample Dup
	Pron Type: Total/NA

Prep Type: Total/NA Prep Batch: 29670

Spike LCSD LCSD %Rec **RPD** Result Qualifier Analyte Added Unit %Rec Limits RPD Limit Benzene 0.100 0.08878 mg/Kg 89 70 - 130 4

QC Sample Results

Client: Ensolum Job ID: 890-2527-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

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

Lab Sample ID: LCSD 880-29670/2-A

Matrix: Solid Analysis Batch: 29611 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 29670

Spike	LCSD	LCSD				%Rec		RPD	
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
0.100	0.09243		mg/Kg		92	70 - 130	6	35	
0.100	0.09135		mg/Kg		91	70 - 130	6	35	
0.200	0.1932		mg/Kg		97	70 - 130	7	35	
0.100	0.1042		mg/Kg		104	70 - 130	7	35	
	Added 0.100 0.100 0.200	Added Result 0.100 0.09243 0.100 0.09135 0.200 0.1932	Added Result Qualifier 0.100 0.09243 0.100 0.09135 0.200 0.1932	Added Result Qualifier Unit 0.100 0.09243 mg/Kg 0.100 0.09135 mg/Kg 0.200 0.1932 mg/Kg	Added Result 0.100 Qualifier 0.100 Unit mg/Kg D 0.100 0.09243 mg/Kg mg/Kg 0.100 0.09135 mg/Kg mg/Kg 0.200 0.1932 mg/Kg	Added Result 0.100 Qualifier 0.100 Unit mg/Kg D 92 %Rec mg/Kg 92 0.100 0.09135 mg/Kg 91 0.200 0.1932 mg/Kg 97	Added Result Qualifier Unit D %Rec Limits 0.100 0.09243 mg/Kg 92 70 - 130 0.100 0.09135 mg/Kg 91 70 - 130 0.200 0.1932 mg/Kg 97 70 - 130	Added Result Qualifier Unit D %Rec Limits RPD 0.100 0.09243 mg/Kg 92 70 - 130 6 0.100 0.09135 mg/Kg 91 70 - 130 6 0.200 0.1932 mg/Kg 97 70 - 130 7	Added Result Qualifier Unit D %Rec Limits RPD Limits 0.100 0.09243 mg/Kg 92 70 - 130 6 35 0.100 0.09135 mg/Kg 91 70 - 130 6 35 0.200 0.1932 mg/Kg 97 70 - 130 7 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-2526-A-1-F MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 29611

Prep Type: Total/NA

Prep Batch: 29670

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.0998	0.09321		mg/Kg		93	70 - 130	
Toluene	<0.00201	U	0.0998	0.08250		mg/Kg		83	70 - 130	
Ethylbenzene	<0.00201	U	0.0998	0.08098		mg/Kg		81	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1700		mg/Kg		85	70 - 130	
o-Xylene	<0.00201	U	0.0998	0.09364		mg/Kg		94	70 - 130	

MS MS

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

Lab Sample ID: 890-2526-A-1-G MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 29611

Prep Type: Total/NA Prep Batch: 29670

%Rec Spike MSD MSD RPD Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Benzene <0.00201 U 0.0994 0.08758 mg/Kg 88 70 - 130 6 35 Toluene <0.00201 U 0.0994 0.08365 mg/Kg 84 70 - 130 35 Ethylbenzene <0.00201 U 0.0994 0.08315 mg/Kg 70 - 130 35 <0.00402 U 0.199 0.1762 89 70 - 130 35 m-Xylene & p-Xylene mg/Kg <0.00201 U 0.0994 o-Xylene 0.09699 mq/Kq 70 - 130 35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-29556/1-A

Matrix: Solid

Analysis Batch: 29497

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

Prep Batch: 29556

мв мв Result Qualifier RL Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 07/12/22 14:20 07/12/22 19:42

(GRO)-C6-C10

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2527-1

SDG: 03D2024001

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

Lab Sample ID: MB 880-29556/1-A

Lab Sample ID: LCS 880-29556/2-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 29497

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29556

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 19:42	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/12/22 19:42	1

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	07/12/22 14:20	07/12/22 19:42	1
o-Terphenyl	117		70 - 130	07/12/22 14:20	07/12/22 19:42	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 29556

Prep Type: Total/NA

Analysis Batch: 29497 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1074 107 70 - 130 mg/Kg (GRO)-C6-C10 1000 917.3 Diesel Range Organics (Over mg/Kg 92 70 - 130 C10-C28)

LCS LCS

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

Lab Sample ID: LCSD 880-29556/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 29497	alysis Batch: 29497				Prep Batch: 2958					
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	951.6		mg/Kg		95	70 - 130	12	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	889.0		mg/Kg		89	70 - 130	3	20	

C10-C28)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-2527-1 MS **Client Sample ID: FS01 Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 29497

Analysis Batch: 29497									Prep	Batch: 29556
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	996	887.1		mg/Kg		89	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U F1	996	682.2	F1	mg/Kg		68	70 - 130	

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	78		70 - 130

Prep Type: Total/NA

Job ID: 890-2527-1 Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

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

Lab Sample ID: 890-2527-1 MSD **Client Sample ID: FS01 Matrix: Solid**

Analysis Batch: 29497

Prep Batch: 29556 Sample Sample Spike MSD MSD RPD Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits RPD Limit D Gasoline Range Organics <49.9 U 998 881.1 mg/Kg 88 70 - 130 20 (GRO)-C6-C10 998 708 4 71 70 - 130Diesel Range Organics (Over <49.9 U F1 mg/Kg 20

C10-C28)

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-29459/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 29599

MB MB

Result Qualifier RL Unit Analyte D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 07/13/22 09:28

Lab Sample ID: LCS 880-29459/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 29599

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 90 - 110 241.0 mg/Kg

Lab Sample ID: LCSD 880-29459/3-A

Matrix: Solid

Analysis Batch: 29599

Spike LCSD LCSD RPD %Rec Analyte Added Result Qualifier Unit %Rec RPD Limit Chloride 250 243.1 97 90 - 110 mg/Kg

Lab Sample ID: 890-2527-7 MS

Matrix: Solid

Analysis Batch: 29599

Sample Sample Spike MS MS %Rec Result Qualifier Added Qualifier Analyte Result Unit %Rec Limits Chloride 251 102 90 - 110 35.1 290.2 mg/Kg

Lab Sample ID: 890-2527-7 MSD

Matrix: Solid

Analysis Batch: 29599

Sample Sample Spike MSD MSD %Rec RPD Qualifier Added RPD Analyte Result Result Qualifier %Rec Limits Limit Unit 251 Chloride 35.1 291.0 102 90 - 110 20 mg/Kg 0

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Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Client Sample ID: FS07

Client Sample ID: FS07

Prep Type: Soluble

Prep Type: Soluble

QC Association Summary

 Client: Ensolum
 Job ID: 890-2527-1

 Project/Site: COLUMBUS 021H & 022H CTB
 SDG: 03D2024001

GC VOA

Prep Batch: 29558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-29558/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 29611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-1	FS01	Total/NA	Solid	8021B	29670
890-2527-2	FS02	Total/NA	Solid	8021B	29670
890-2527-3	FS03	Total/NA	Solid	8021B	29670
890-2527-4	FS04	Total/NA	Solid	8021B	29670
890-2527-5	FS05	Total/NA	Solid	8021B	29670
890-2527-6	FS06	Total/NA	Solid	8021B	29670
890-2527-7	FS07	Total/NA	Solid	8021B	29670
890-2527-8	FS08	Total/NA	Solid	8021B	29670
MB 880-29558/5-A	Method Blank	Total/NA	Solid	8021B	29558
MB 880-29670/5-A	Method Blank	Total/NA	Solid	8021B	29670
LCS 880-29670/1-A	Lab Control Sample	Total/NA	Solid	8021B	29670
LCSD 880-29670/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29670
890-2526-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	29670
890-2526-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	29670

Prep Batch: 29670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-1	FS01	Total/NA	Solid	5035	
890-2527-2	FS02	Total/NA	Solid	5035	
890-2527-3	FS03	Total/NA	Solid	5035	
890-2527-4	FS04	Total/NA	Solid	5035	
890-2527-5	FS05	Total/NA	Solid	5035	
890-2527-6	FS06	Total/NA	Solid	5035	
890-2527-7	FS07	Total/NA	Solid	5035	
890-2527-8	FS08	Total/NA	Solid	5035	
MB 880-29670/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29670/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29670/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2526-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2526-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 29741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-1	FS01	Total/NA	Solid	Total BTEX	
890-2527-2	FS02	Total/NA	Solid	Total BTEX	
890-2527-3	FS03	Total/NA	Solid	Total BTEX	
890-2527-4	FS04	Total/NA	Solid	Total BTEX	
890-2527-5	FS05	Total/NA	Solid	Total BTEX	
890-2527-6	FS06	Total/NA	Solid	Total BTEX	
890-2527-7	FS07	Total/NA	Solid	Total BTEX	
890-2527-8	FS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 29497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-1	FS01	Total/NA	Solid	8015B NM	29556

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QC Association Summary

 Client: Ensolum
 Job ID: 890-2527-1

 Project/Site: COLUMBUS 021H & 022H CTB
 SDG: 03D2024001

GC Semi VOA (Continued)

Analysis Batch: 29497 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-2	FS02	Total/NA	Solid	8015B NM	29556
890-2527-3	FS03	Total/NA	Solid	8015B NM	29556
890-2527-4 - RA4	FS04	Total/NA	Solid	8015B NM	29556
890-2527-5	FS05	Total/NA	Solid	8015B NM	29556
890-2527-6	FS06	Total/NA	Solid	8015B NM	29556
890-2527-7	FS07	Total/NA	Solid	8015B NM	29556
890-2527-8	FS08	Total/NA	Solid	8015B NM	29556
MB 880-29556/1-A	Method Blank	Total/NA	Solid	8015B NM	29556
LCS 880-29556/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	29556
LCSD 880-29556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	29556
890-2527-1 MS	FS01	Total/NA	Solid	8015B NM	29556
890-2527-1 MSD	FS01	Total/NA	Solid	8015B NM	29556

Prep Batch: 29556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-1	FS01	Total/NA	Solid	8015NM Prep	
890-2527-2	FS02	Total/NA	Solid	8015NM Prep	
890-2527-3	FS03	Total/NA	Solid	8015NM Prep	
890-2527-4 - RA4	FS04	Total/NA	Solid	8015NM Prep	
890-2527-5	FS05	Total/NA	Solid	8015NM Prep	
890-2527-6	FS06	Total/NA	Solid	8015NM Prep	
890-2527-7	FS07	Total/NA	Solid	8015NM Prep	
890-2527-8	FS08	Total/NA	Solid	8015NM Prep	
MB 880-29556/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-29556/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-29556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2527-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-2527-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 29631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2527-1	FS01	Total/NA	Solid	8015 NM	
890-2527-2	FS02	Total/NA	Solid	8015 NM	
890-2527-3	FS03	Total/NA	Solid	8015 NM	
890-2527-4	FS04	Total/NA	Solid	8015 NM	
890-2527-5	FS05	Total/NA	Solid	8015 NM	
890-2527-6	FS06	Total/NA	Solid	8015 NM	
890-2527-7	FS07	Total/NA	Solid	8015 NM	
890-2527-8	FS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 29459

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-1	FS01	Soluble	Solid	DI Leach	
890-2527-2	FS02	Soluble	Solid	DI Leach	
890-2527-3	FS03	Soluble	Solid	DI Leach	
890-2527-4	FS04	Soluble	Solid	DI Leach	
890-2527-5	FS05	Soluble	Solid	DI Leach	
890-2527-6	FS06	Soluble	Solid	DI Leach	
890-2527-7	FS07	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum Job ID: 890-2527-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

HPLC/IC (Continued)

Leach Batch: 29459 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-8	FS08	Soluble	Solid	DI Leach	
MB 880-29459/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-29459/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-29459/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2527-7 MS	FS07	Soluble	Solid	DI Leach	
890-2527-7 MSD	FS07	Soluble	Solid	DI Leach	

Analysis Batch: 29599

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2527-1	FS01	Soluble	Solid	300.0	29459
890-2527-2	FS02	Soluble	Solid	300.0	29459
890-2527-3	FS03	Soluble	Solid	300.0	29459
890-2527-4	FS04	Soluble	Solid	300.0	29459
890-2527-5	FS05	Soluble	Solid	300.0	29459
890-2527-6	FS06	Soluble	Solid	300.0	29459
890-2527-7	FS07	Soluble	Solid	300.0	29459
890-2527-8	FS08	Soluble	Solid	300.0	29459
MB 880-29459/1-A	Method Blank	Soluble	Solid	300.0	29459
LCS 880-29459/2-A	Lab Control Sample	Soluble	Solid	300.0	29459
LCSD 880-29459/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	29459
890-2527-7 MS	FS07	Soluble	Solid	300.0	29459
890-2527-7 MSD	FS07	Soluble	Solid	300.0	29459

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Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB Job ID: 890-2527-1 SDG: 03D2024001

Client Sample ID: FS01

Lab Sample ID: 890-2527-1 Date Collected: 07/07/22 14:40 Date Received: 07/11/22 10:26

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 00:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29741	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29631	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/12/22 20:46	SM	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 11:55	CH	XEN MID

Lab Sample ID: 890-2527-2 **Client Sample ID: FS02** Matrix: Solid

Date Collected: 07/07/22 14:45 Date Received: 07/11/22 10:26

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 29670 Total/NA 4.99 g 5 mL 07/13/22 14:00 MR XEN MID Total/NA 8021B 5 mL 07/14/22 00:47 XEN MID Analysis 1 5 mL 29611 MR Total/NA Total BTEX 29741 07/14/22 10:14 XEN MID Analysis 1 SM Total/NA Analysis 8015 NM 29631 07/13/22 09:45 SM XEN MID Total/NA 29556 XEN MID Prep 8015NM Prep 10.01 g 07/12/22 14:20 DM 10 mL Total/NA Analysis 8015B NM 29497 07/12/22 21:50 SM XEN MID Soluble 07/12/22 12:00 SMC XEN MID Leach DI Leach 4.95 g 50 mL 29459 Soluble Analysis 300.0 29599 07/13/22 12:18 СН XEN MID

Lab Sample ID: 890-2527-3 **Client Sample ID: FS03**

Date Collected: 07/07/22 14:50 Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 01:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29741	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29631	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/12/22 22:11	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 12:26	CH	XEN MID

Client Sample ID: FS04 Lab Sample ID: 890-2527-4

Date Collected: 07/07/22 14:55 Matrix: Solid Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 01:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29741	07/14/22 10:14	SM	XEN MID

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Matrix: Solid

Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB Job ID: 890-2527-1 SDG: 03D2024001

Client Sample ID: FS04 Lab Sample ID: 890-2527-4 Date Collected: 07/07/22 14:55

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			29631	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep	RA4		10.03 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM	RA4	1			29497	07/12/22 22:33	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 14:16	CH	XEN MID

Client Sample ID: FS05 Lab Sample ID: 890-2527-5

Matrix: Solid

Date Collected: 07/07/22 15:00 Date Received: 07/11/22 10:26

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 01:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29741	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29631	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/12/22 22:54	SM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 14:24	CH	XEN MID

Client Sample ID: FS06 Lab Sample ID: 890-2527-6 Date Collected: 07/07/22 15:05

Matrix: Solid Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 02:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29741	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29631	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/12/22 23:16	SM	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 14:32	CH	XEN MID

Lab Sample ID: 890-2527-7 **Client Sample ID: FS07**

Date Collected: 07/08/22 13:15 **Matrix: Solid** Date Received: 07/11/22 10:26

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 03:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29741	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29631	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/12/22 23:37	SM	XEN MID

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Lab Chronicle

Client: Ensolum Job ID: 890-2527-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: FS07 Lab Sample ID: 890-2527-7

Date Collected: 07/08/22 13:15

Date Received: 07/11/22 10:26

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 14:40	CH	XEN MID

Client Sample ID: FS08 Lab Sample ID: 890-2527-8

Date Collected: 07/08/22 13:20 Matrix: Solid

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 04:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29741	07/14/22 10:14	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29631	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/12/22 23:59	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 15:03	CH	XEN MID

Laboratory References:

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

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Accreditation/Certification Summary

Client: Ensolum Job ID: 890-2527-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Total BTEX

Laboratory: Eurofins Midland

Total BTEX

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes	are included in this report, bu	ut the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes fo
The following analytes the agency does not of	•	ut the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes fo
• ,	•	ut the laboratory is not certifi Matrix	ed by the governing authority. This list ma	ay include analytes fo

Solid

Method Summary

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2527-1

SDG: 03D2024001

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
00.0	Anions, Ion Chromatography	MCAWW	XEN MID
6035	Closed System Purge and Trap	SW846	XEN MID
015NM Prep	Microextraction	SW846	XEN MID
I Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

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Sample Summary

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2527-1

SDG: 03D2024001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2527-1	FS01	Solid	07/07/22 14:40	07/11/22 10:26	0.75
890-2527-2	FS02	Solid	07/07/22 14:45	07/11/22 10:26	0.75
890-2527-3	FS03	Solid	07/07/22 14:50	07/11/22 10:26	0.75
890-2527-4	FS04	Solid	07/07/22 14:55	07/11/22 10:26	0.75
890-2527-5	FS05	Solid	07/07/22 15:00	07/11/22 10:26	0.75
890-2527-6	FS06	Solid	07/07/22 15:05	07/11/22 10:26	0.75
890-2527-7	FS07	Solid	07/08/22 13:15	07/11/22 10:26	0.75
890-2527-8	FS08	Solid	07/08/22 13:20	07/11/22 10:26	0.75

Circle Method(s

Total 200.7 / (

service. Eurofins Xe Eurofins Xenco. A m tice: Signature of thi

Relinquished by: (Signature)

The same

201 50/11/4

Revised Date: 08/25/2020 Rev. 2020.2

: eurofins Kenco knyironment lesting

Project Manager:

Kalei Jennings

Ensolum, LLC

Company Name: Bill to: (if different)

Kalei Jennigns

Ensolum, LLC

Address:

601 N Marienfeld St Suite 400

ompany Name:

Chain of Custody

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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

Reporting: Level II QLevel III Q PST/JST TRRP Level IV Deliverables: EDD ADaPT Other:
Reporting: Level III
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV☐
State of Project:
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
Work Order Comments
www.xenco.com Page 1 of 2

Midland, TX 79701			City, State ZIP:	ZIP:	Midla	Midland, TX 79701	79701	Reporting: Level	II Li Level III
817-683-2503		Email:	Email: kjennings@ensolum.com	@ensolu	m.com			Deliverables: EI	iles: EDD
Columbus 021H & 022H CTB	, 022H CTB	Turn	Turn Around					ANALYSIS REQUEST	Preservative Codes
03D2024001	001	Routine	☑ Rush	Pres. Code	a ."				None: NO DI Water: H ₂ O
		Due Date:	3 Day TAT						<u>∪</u>
Conner Shore	lore	TAT starts the day received by the lab, if received by 4:30pm	day receive						H ₂ So ₂ : H ₂ NaOH: Na
IPT Temp Blank:	res) No	Wet Ice:	Yes No	neter	.0)				H₃PO₄: HP
Intact: Res No	Thermometer ID:	ter ID:	TAINS	tran	300				NaHSO4: NABIS
als: Yes No An	MA Correction Factor	Factor:	-0.	Pa	PA:			890-2527 Chain of Custody	Na ₂ S ₂ O ₃ : NaSO ₃
als: Yes No WA	A Temperature Reading:	re Reading:	5,4		S (E				Zn Acetate+NaOH: Zn
	Corrected 1	Corrected Temperature:	5.2	Y	IDE)15)	8021		NaOH+Ascorbic Acid: SAPC
ntification Matrix	Date Sampled	Time Sampled	Depth C	Grab/ # of Comp Cont	CHLOR	TPH (80	BTEX (Sample Comments
01 S	07.07.22	1440	0.75'	C 1	×	×	×		
02 S	07.07.22	1445	0.75'	C 1	×	×	×		
03 S	07.07.22	1450	0.75'	C 1	×	×	×		
04 S	07.07.22	1455	0.75'	C 1	×	×	×		
05 S	07.07.22	1500	0.75'	C 1	×	×	×		
06 S	07.07.22	1505	0.75'	C 1	×	×	×		
07 S	07.08.22	1315	0.75'	C 1	×	×	×		
08 S	07.08.22	1320	0.75'	C 1	×	×	×		
				-					
3010 200.8 / 6020:	~	8RCRA 13PPM		Texas 11 Al	S	As Ba	Ве В	Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni	K Se /
and Metal(s) to be analyzed	alyzed	TCLP/S	TCLP / SPLP 6010: 8RCRA	8RCR4	Sb /	As Ba	Be C	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	TI U Hg: 1631 / 245.1 / 7470 / 7471
document and relinquishme	ent of samples co	nstitutes a valid	purchase orde	r from clier	it compar	ny to Eur	ofins Xe	s document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard	tandard terms and conditions
nco will be liable only for the inimum charge of \$85.00 will	cost of samples a be applied to eac	and shall not ass th project and a c	harge of \$5 fo	r each sam	r any losa ple subm	jes or ex itted to E	penses	nco 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 circumstant Inimum charge of \$86.00 will be applied to each project and a charge of \$6 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unite	roed unless previously negotiated.
y: (Signature)	Receixe	Receixed by: (Signature)	ture)		Date	Date/Time		Relinquished by: (Signature)	Received by: (Signature) Date/Time

PO#

Sampler's Name:

Project Location

roject Number:

roject Name:

Phone: City, State ZIP: Address:

601 N Marienfeld St Suite 400

SAMPLE REC

Sample Custody Si Cooler Custody Se Samples Received

Total Containers:

Sample Ide

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2527-1 SDG Number: 03D2024001

List Source: Eurofins Carlsbad

Login Number: 2527 List Number: 1 Creator: Clifton, Cloe

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

<6mm (1/4").

7/14/2022

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2527-1 SDG Number: 03D2024001

List Source: Eurofins Midland

Login Number: 2527 List Number: 2 List Creation: 07/12/22 11:11 AM

Creator: Rodriguez, Leticia

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	



ANALYTICAL REPORT

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

Laboratory Job ID: 890-2528-1

Laboratory Sample Delivery Group: 03D2024001 Client Project/Site: COLUMBUS 021H & 022H CTB

Revision: 1

For:

eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMPR

Authorized for release by: 7/18/2022 2:52:16 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Received by OCD: 7/21/2022 4:47:03 PM

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 9/20/2022 11:45:39 AM

.....LINKS

Review your project results through

EOL

Have a Question?

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

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

Client: Ensolum
Project/Site: COLUMBUS 021H & 022H CTB

Laboratory Job ID: 890-2528-1 SDG: 03D2024001

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Definitions/Glossary

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB

SDG: 03D2024001

Qualifiers

GC VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

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

HPLC/IC

Qualifier **Qualifier Description**

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)

Dilution Factor Dil Fac

Detection Limit (DoD/DOE) DΙ

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**

Presumptive **PRES** 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: COLUMBUS 021H & 022H CTB

Job ID: 890-2528-1

SDG: 03D2024001

Job ID: 890-2528-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2528-1

REVISION

The report being provided is a revision of the original report sent on 7/14/2022. The report (revision 1) is being revised due to Per client email, requested sample ID changes.

Report revision history

Receipt

The samples were received on 7/11/2022 10:26 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

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

GC Semi VOA

Method 8015MOD NM: The matrix spike (MS) recoveries for preparation batch 880-29556 and analytical batch 880-29497 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC

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

Date Received: 07/11/22 10:26

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: PH01 Lab Sample ID: 890-2528-1 Date Collected: 07/08/22 11:50

Matrix: Solid

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 08:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 08:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 08:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 08:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 08:52	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 08:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			07/13/22 14:00	07/14/22 08:52	1
1,4-Difluorobenzene (Surr)	81		70 - 130			07/13/22 14:00	07/14/22 08:52	1
- Method: Total BTEX - Tota	I BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/14/22 14:30	1
Method: 8015 NM - Diesel	Range Organic	s (DRO) (0	SC)					
			•		_			
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 02:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 02:07	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 02:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130			07/12/22 14:20	07/13/22 02:07	1
o-Terphenyl	102		70 130			07/12/22 14:20	07/13/22 02:07	1

	Method: 300.0 - Anions, Ion Chromatography - Soluble								
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	<4.99	U	4.99	mg/Kg			07/13/22 15:11	1

Lab Sample ID: 890-2528-2 **Client Sample ID: PH01A** Date Collected: 07/08/22 11:55 **Matrix: Solid**

Date Received: 07/11/22 10:26

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 09:12	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 09:12	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 09:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 09:12	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		07/13/22 14:00	07/14/22 09:12	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/13/22 14:00	07/14/22 09:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			07/13/22 14:00	07/14/22 09:12	1

Matrix: Solid

Lab Sample ID: 890-2528-2

Client: Ensolum Job ID: 890-2528-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: PH01A

Date Collected: 07/08/22 11:55 Date Received: 07/11/22 10:26

Sample Depth: 2

Method: 8021B - Vol	atile Organic C	Compounds (GC)	(Continued)
Method. 002 1D - Voi	ame Organic C	Julipuulius (G C) ((Continueu)

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	97		70 - 130	07/13/22 14:00 07/14/22 09:12	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/14/22 14:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/13/22 09:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 02:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 02:29	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 02:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifie	er Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106	70 - 130	07/12/22 14:20	07/13/22 02:29	1
o-Terphenyl	110	70 - 130	07/12/22 14:20	07/13/22 02:29	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.96 U	4.96	mg/Kg			07/13/22 15:35	1

Client Sample ID: PH02

Date Collected: 07/08/22 12:00

Lab Sample ID: 890-2528-3

Matrix: Solid

Date Collected: 07/08/22 12:00 Date Received: 07/11/22 10:26

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 09:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:33	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 09:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			07/13/22 14:00	07/14/22 09:33	1
1,4-Difluorobenzene (Surr)	102		70 - 130			07/13/22 14:00	07/14/22 09:33	1

Mothodi	Total DTEV	- Total RTFX	Coloulation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00399	U	0.00399	mg/Kg			07/14/22 14:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg	_		07/13/22 09:45	1

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1

3

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9

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12

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-2528-3

Client Sample Results

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: PH02

Date Collected: 07/08/22 12:00 Date Received: 07/11/22 10:26

Sample Depth: 1								
Method: 8015B NM - Diesel	Range Organi	ics (DRO) (G	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 02:50	1

50.0 Diesel Range Organics (Over <50.0 U mg/Kg 07/12/22 14:20 07/13/22 02:50 C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 07/12/22 14:20 07/13/22 02:50 mg/Kg Limits Dil Fac Surrogate %Recovery Qualifier Prepared Analyzed 1-Chlorooctane 70 - 130 07/12/22 14:20 07/13/22 02:50 113

07/12/22 14:20 07/13/22 02:50 o-Terphenyl 123 70 - 130 Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier Unit RL Prepared Analyzed Dil Fac

5.04 07/13/22 15:43 Chloride mg/Kg 16.1 **Client Sample ID: PH02A** Lab Sample ID: 890-2528-4

Date Collected: 07/08/22 12:05 Date Received: 07/11/22 10:26

Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:53	1
m-Xylene & p-Xylene	< 0.00401	U	0.00401	mg/Kg		07/13/22 14:00	07/14/22 09:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 09:53	1
Xylenes, Total	< 0.00401	U	0.00401	mg/Kg		07/13/22 14:00	07/14/22 09:53	1

Surrogate	%Recovery C	Qualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102	70 - 13	07/13/22 14:00	07/14/22 09:53	1
1,4-Difluorobenzene (Surr)	101	70 - 13	07/13/22 14:00	07/14/22 09:53	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg		_	07/14/22 14:30	1

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

Analyte	Result (Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 L	U	49.9	mg/Kg			07/13/22 09:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg	_	07/12/22 14:20	07/13/22 03:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 03:12	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 03:12	1

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86	70 - 130	07/12/22 14:20	07/13/22 03:12	1
o-Terphenyl	87	70 - 130	07/12/22 14:20	07/13/22 03:12	1

Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2528-1

SDG: 03D2024001

Client Sample ID: PH02A

Date Collected: 07/08/22 12:05 Date Received: 07/11/22 10:26

Lab Sample ID: 890-2528-4 **Matrix: Solid**

Sample Depth: 2

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	11.9	4.97	mg/Kg			07/13/22 15:50	1		

Client Sample ID: PH03 Lab Sample ID: 890-2528-5

Date Collected: 07/08/22 12:10 Matrix: Solid

Date Received: 07/11/22 10:26

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 10:14	
Toluene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 10:14	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 10:14	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/13/22 14:00	07/14/22 10:14	
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/13/22 14:00	07/14/22 10:14	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/13/22 14:00	07/14/22 10:14	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	103		70 - 130			07/13/22 14:00	07/14/22 10:14	
1,4-Difluorobenzene (Surr)	98		70 - 130			07/13/22 14:00	07/14/22 10:14	
Method: Total BTEX - Total B	ΓEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/14/22 14:30	
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.8	U	49.8	mg/Kg			07/13/22 09:45	
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		07/12/22 14:20	07/13/22 03:33	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		07/12/22 14:20	07/13/22 03:33	
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		07/12/22 14:20	07/13/22 03:33	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	97		70 - 130			07/12/22 14:20	07/13/22 03:33	
o-Terphenyl	100		70 - 130				07/13/22 03:33	

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Analyzed

07/13/22 15:58

Dil Fac

RL

5.03

Unit

mg/Kg

D

Prepared

Analyte

Chloride

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<5.03 U

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Da Date Received: 07/11/22 10:26

Sample Depth: 2

lient Sample ID: PH03A	Lab Sample ID: 890-2528-6
ate Collected: 07/08/22 12:15	Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 10:34	1
Toluene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 10:34	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 10:34	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		07/13/22 14:00	07/14/22 10:34	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 10:34	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		07/13/22 14:00	07/14/22 10:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			07/13/22 14:00	07/14/22 10:34	1
1,4-Difluorobenzene (Surr)	97		70 - 130			07/13/22 14:00	07/14/22 10:34	1

Method: Total BTEX - Total BT	EX Caicula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			07/14/22 14:30	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Į	Total TPH	<49.9	U	49.9	mg/Kg			07/13/22 09:45	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 03:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 03:54	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 03:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130			07/12/22 14:20	07/13/22 03:54	1

Method: 300.0 - Anions, Ion Ch	nromatography - Solut	ble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.16	5.02	mg/Kg			07/13/22 16:06	1

70 - 130

108

Lab Sample ID: 890-2528-7 **Client Sample ID: PH04** Date Collected: 07/08/22 12:20 **Matrix: Solid**

Date Received: 07/11/22 10:26

Sample Depth: 1

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 10:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 10:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 10:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 10:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/13/22 14:00	07/14/22 10:55	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/13/22 14:00	07/14/22 10:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			07/13/22 14:00	07/14/22 10:55	1

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07/12/22 14:20 07/13/22 03:54

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: PH04 Lab Sample ID: 890-2528-7

Date Collected: 07/08/22 12:20 Matrix: Solid Date Received: 07/11/22 10:26

Sample Depth: 1

Surrogate		alifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98	70 - 130	07/13/22 14:00	07/14/22 10:55	1

Mothod: Tota	I RTFY - Tota	al BTEX Calculation	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00399	U	0.00399	ma/Ka		<u> </u>	07/14/22 14:30	1

Method: 8015 NM	- Diesel Range Or	rganics (DRO) (G	C)
Michigal octorial	- Diesei Runge Oi	gaines (bite) (e	- ,

Analyte	Result Qualific	er RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 U	49.9	mg/Kg			07/13/22 09:45	1

		()	\ - - /					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 04:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 04:16	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/12/22 14:20	07/13/22 04:16	1
Surrogato	%Pocovory	Qualifier	Limite			Propared	Analyzod	Dil Eac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89	70 - 130	07/12/22 14:20	07/13/22 04:16	1
o-Terphenyl	92	70 - 130	07/12/22 14:20	07/13/22 04:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02 U	5.02	mg/Kg			07/13/22 16:14	1

Client Sample ID: PH04A Lab Sample ID: 890-2528-8 Matrix: Solid

Date Collected: 07/08/22 12:25 Date Received: 07/11/22 10:26

Sample Depth: 2

Mothod: 9021B	Volatile	Organic (Compounds	(CC)

Method: 8021B - Volatile O	rganic Compo	unas (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 11:15	1
Toluene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 11:15	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 11:15	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		07/13/22 14:00	07/14/22 11:15	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		07/13/22 14:00	07/14/22 11:15	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		07/13/22 14:00	07/14/22 11:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			07/13/22 14:00	07/14/22 11:15	1
1,4-Difluorobenzene (Surr)	100		70 - 130			07/13/22 14:00	07/14/22 11:15	1

4-Bromonuorobenzene (Surr)	104	70 - 130	07/13/22 14.00 07/14/22 11.15	ı
1,4-Difluorobenzene (Surr)	100	70 - 130	07/13/22 14:00 07/14/22 11:15	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			07/14/22 14:30	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg		_	07/13/22 09:45	1

Matrix: Solid

Lab Sample ID: 890-2528-8

Client Sample Results

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Client Sample ID: PH04A

Date Collected: 07/08/22 12:25 Date Received: 07/11/22 10:26

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 04:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 04:38	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/12/22 14:20	07/13/22 04:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130			07/12/22 14:20	07/13/22 04:38	1
o-Terphenyl	87		70 - 130			07/12/22 14:20	07/13/22 04:38	1

Method: 300.0 - Anions, Ion Ch	nromatogra	phy - Solul	ole					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97	mg/Kg			07/13/22 16:22	1

Surrogate Summary

Client: Ensolum Job ID: 890-2528-1
Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

•			Per	cent Surrogate Red
		BFB1	DFBZ1	
Lab Sample ID C	lient Sample ID	(70-130)	(70-130)	
890-2526-A-1-F MS N	Matrix Spike	101	99	
890-2526-A-1-G MSD N	Matrix Spike Duplicate	103	99	
890-2528-1 P	PH01	100	81	
890-2528-2 P	PH01A	106	97	
890-2528-3 P	PH02	106	102	
890-2528-4 P	PH02A	102	101	
890-2528-5 P	PH03	103	98	
890-2528-6 P	PH03A	100	97	
890-2528-7 P	PH04	103	98	
890-2528-8 P	PH04A	104	100	
LCS 880-29670/1-A L	ab Control Sample	96	97	
LCSD 880-29670/2-A L	ab Control Sample Dup	101	96	
MB 880-29558/5-A N	lethod Blank	96	99	
MB 880-29670/5-A N	lethod Blank	95	94	
Surrogate Legend				
BFB = 4-Bromofluorobenzen	ne (Surr)			
DFBZ = 1,4-Difluorobenzene	e (Surr)			

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

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		1CO1	OTPH1				
Lab Sample ID	Client Sample ID	(70-130)	(70-130)				
890-2527-A-1-C MS	Matrix Spike	81	78				
890-2527-A-1-D MSD	Matrix Spike Duplicate	80	80				
890-2528-1	PH01	102	102				
890-2528-2	PH01A	106	110				
890-2528-3	PH02	113	123				
890-2528-4	PH02A	86	87				
890-2528-5	PH03	97	100				
890-2528-6	PH03A	104	108				
890-2528-7	PH04	89	92				
890-2528-8	PH04A	83	87				
LCS 880-29556/2-A	Lab Control Sample	99	109				
LCSD 880-29556/3-A	Lab Control Sample Dup	95	101				
MB 880-29556/1-A	Method Blank	112	117				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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2022 (Day

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-29558/5-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29558

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/12/22 14:57	07/13/22 10:58	1
Xylenes, Total	< 0.00399	U	0.00399	mg/Kg		07/12/22 14:57	07/13/22 10:58	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed
4-Bromofluorobenzene (Surr)	96	70 - 130	07/12/22 14:57	07/13/22 10:58
1,4-Difluorobenzene (Surr)	99	70 ₋ 130	07/12/22 14:57	07/13/22 10:58

4:57 07/13/22 10:58 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29670

Analysis Batch: 29611 MB MB

Lab Sample ID: MB 880-29670/5-A

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene 0.00200 07/13/22 14:00 07/13/22 22:36 <0.00200 U mg/Kg Toluene mg/Kg 07/13/22 14:00 07/13/22 22:36 <0.00200 U 0.00200 Ethylbenzene 0.00200 mg/Kg 07/13/22 14:00 07/13/22 22:36 <0.00200 U 07/13/22 14:00 07/13/22 22:36 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg o-Xylene <0.00200 U 0.00200 mg/Kg 07/13/22 14:00 07/13/22 22:36 Xylenes, Total <0.00400 U 0.00400 mg/Kg 07/13/22 14:00 07/13/22 22:36

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared Anal	yzed D	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	07/13/22 14:00 07/13/2	2 22:36	1
1,4-Difluorobenzene (Surr)	94		70 - 130	07/13/22 14:00 07/13/2	2 22:36	1

Lab Sample ID: LCS 880-29670/1-A

Matrix: Solid

Analysis Batch: 29611

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

Prep Batch: 29670

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09248		mg/Kg		92	70 - 130	
Toluene	0.100	0.08671		mg/Kg		87	70 - 130	
Ethylbenzene	0.100	0.08569		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	0.200	0.1808		mg/Kg		90	70 - 130	
o-Xylene	0.100	0.09740		mg/Kg		97	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	r Limits
4-Bromofluorobenzene (Surr)	96	70 - 130
1,4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: LCSD 880-29670/2-A				Client Sai	mple	ID: Lab	Control	Sample	Dup
Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 29611							Prep E	Batch: 2	29670
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08878		mg/Kg		89	70 - 130	4	35

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Dil Fac

QC Sample Results

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

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

Lab Sample ID: LCSD 880-29670/2-A

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 29670

LCSD LCSD Spike %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Toluene 0.100 0.09243 mg/Kg 92 70 - 130 6 35 Ethylbenzene 0.100 0.09135 mg/Kg 91 70 - 1306 35 0.200 0.1932 mg/Kg 97 70 - 130 7 35 m-Xylene & p-Xylene 0.100 35 o-Xylene 0.1042 mg/Kg 104 70 - 130

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-2526-A-1-F MS

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 29670

Sample Sample Spike MS MS %Rec Result Qualifier Analyte Added Result Qualifier D %Rec Limits Unit Benzene <0.00201 U 0.0998 0.09321 93 70 - 130 mg/Kg Toluene <0.00201 U 0.0998 0.08250 mg/Kg 83 70 - 130 Ethylbenzene <0.00201 U 0.0998 0.08098 mg/Kg 81 70 - 130 m-Xylene & p-Xylene <0.00402 U 0.200 85 70 - 130 0.1700 mg/Kg o-Xylene <0.00201 U 0.0998 0.09364 mg/Kg 94 70 - 130

MS MS

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

Lab Sample ID: 890-2526-A-1-G MSD

Matrix: Solid

Analysis Batch: 29611

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 29670

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0994	0.08758		mg/Kg		88	70 - 130	6	35
Toluene	<0.00201	U	0.0994	0.08365		mg/Kg		84	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.0994	0.08315		mg/Kg		84	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1762		mg/Kg		89	70 - 130	4	35
o-Xylene	<0.00201	U	0.0994	0.09699		mg/Kg		98	70 - 130	4	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-29556/1-A

Matrix: Solid

Analysis Batch: 29497

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

Prep Batch: 29556

MB MB Result Qualifier RL Unit Analyte Prepared Analyzed Gasoline Range Organics <50.0 U 50.0 mg/Kg 07/12/22 14:20 07/12/22 19:42

(GRO)-C6-C10

Client Sample ID: Method Blank

07/12/22 14:20 07/12/22 19:42

Client Sample ID: Lab Control Sample

70 - 130

92

Prep Type: Total/NA

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

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

Lab Sample ID: MB 880-29556/1-A	
Matrix: Solid	

Analysis Batch: 29497

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

C10-C28)

Prep Batch: 29556 MB MB Result Qualifier RL Unit Prepared Analyzed Dil Fac <50.0 U 50.0 mg/Kg 07/12/22 14:20 07/12/22 19:42

mg/Kg

mg/Kg

MB MB

<50.0 U

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	07/12/22 14:20	07/12/22 19:42	1
o-Terphenyl	117		70 - 130	07/12/22 14:20	07/12/22 19:42	1

50.0

Lab Sample ID: LCS 880-29556/2-A

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 29497** Prep Batch: 29556 LCS LCS Spike %Rec Added Result Qualifier Limits Analyte Unit D %Rec Gasoline Range Organics 1000 1074 70 - 130 mg/Kg 107

917.3

1000

(GRO)-C6-C10 Diesel Range Organics (Over

C10-C28)

LCS LCS

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

Lab Sample ID: LCSD 880-29556/3-A

Client Sample ID: Lab Control Sample Dup Matrix: Solid Prep Type: Total/NA **Analysis Batch: 29497** Prep Batch: 29556

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	951.6		mg/Kg		95	70 - 130	12	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	889.0		mg/Kg		89	70 - 130	3	20	
C10-C28)										

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	95	70 - 130
o-Terphenyl	101	70 - 130

Lab Sample ID: 890-2527-A-1-C MS

Matrix: Solid

Analysis Batch: 29497

Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 29556

Sample Sample Spike MS MS %Rec **Analyte** Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <49.9 U 996 887.1 89 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.9 UF1 996 682.2 F1 mg/Kg 68 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	78		70 - 130

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

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

Lab Sample ID: 890-2527-A-1-D MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Solid

Prep Type: Total/NA Prep Batch: 29556

Analysis Batch: 29497 Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit Analyte <49.9 U Gasoline Range Organics 998 881.1 mg/Kg 88 70 - 130 1 20 (GRO)-C6-C10 998 Diesel Range Organics (Over <49.9 UF1 708.4 mg/Kg 70 - 130 71 20

C10-C28)

MSD MSD

Surrogate	%Recovery Qu	alifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	80		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-29459/1-A **Client Sample ID: Method Blank Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 29599

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			07/13/22 09:28	1

Lab Sample ID: LCS 880-29459/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble Matrix: Solid**

Analysis Batch: 29599

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	241.0		mg/Kg		96	90 - 110	

Lab Sample ID: LCSD 880-29459/3-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid Prep Type: Soluble**

Analysis Batch: 29599

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	243.1		mg/Kg	_	97	90 - 110	1	20

Lab Sample ID: 890-2527-A-7-E MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 29599

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	35.1		251	290.2		ma/Ka	_	102	90 - 110	

Lab Sample ID: 890-2527-A-7-F MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 29599

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	35.1		251	291.0		mg/Kg		102	90 - 110	0	20

QC Association Summary

Job ID: 890-2528-1 Client: Ensolum Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

GC VOA

Prep Batch: 29558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-29558/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 29611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Total/NA	Solid	8021B	29670
890-2528-2	PH01A	Total/NA	Solid	8021B	29670
890-2528-3	PH02	Total/NA	Solid	8021B	29670
890-2528-4	PH02A	Total/NA	Solid	8021B	29670
890-2528-5	PH03	Total/NA	Solid	8021B	29670
890-2528-6	PH03A	Total/NA	Solid	8021B	29670
890-2528-7	PH04	Total/NA	Solid	8021B	29670
890-2528-8	PH04A	Total/NA	Solid	8021B	29670
MB 880-29558/5-A	Method Blank	Total/NA	Solid	8021B	29558
MB 880-29670/5-A	Method Blank	Total/NA	Solid	8021B	29670
LCS 880-29670/1-A	Lab Control Sample	Total/NA	Solid	8021B	29670
LCSD 880-29670/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29670
890-2526-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	29670
890-2526-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	29670

Prep Batch: 29670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Total/NA	Solid	5035	
890-2528-2	PH01A	Total/NA	Solid	5035	
890-2528-3	PH02	Total/NA	Solid	5035	
890-2528-4	PH02A	Total/NA	Solid	5035	
890-2528-5	PH03	Total/NA	Solid	5035	
890-2528-6	PH03A	Total/NA	Solid	5035	
890-2528-7	PH04	Total/NA	Solid	5035	
890-2528-8	PH04A	Total/NA	Solid	5035	
MB 880-29670/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29670/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29670/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2526-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2526-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 29760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Total/NA	Solid	Total BTEX	
890-2528-2	PH01A	Total/NA	Solid	Total BTEX	
890-2528-3	PH02	Total/NA	Solid	Total BTEX	
890-2528-4	PH02A	Total/NA	Solid	Total BTEX	
890-2528-5	PH03	Total/NA	Solid	Total BTEX	
890-2528-6	PH03A	Total/NA	Solid	Total BTEX	
890-2528-7	PH04	Total/NA	Solid	Total BTEX	
890-2528-8	PH04A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 29497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Total/NA	Solid	8015B NM	29556

QC Association Summary

Client: Ensolum Job ID: 890-2528-1 Project/Site: COLUMBUS 021H & 022H CTB SDG: 03D2024001

GC Semi VOA (Continued)

Analysis Batch: 29497 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-2	PH01A	Total/NA	Solid	8015B NM	29556
890-2528-3	PH02	Total/NA	Solid	8015B NM	29556
890-2528-4	PH02A	Total/NA	Solid	8015B NM	29556
890-2528-5	PH03	Total/NA	Solid	8015B NM	29556
890-2528-6	PH03A	Total/NA	Solid	8015B NM	29556
890-2528-7	PH04	Total/NA	Solid	8015B NM	29556
890-2528-8	PH04A	Total/NA	Solid	8015B NM	29556
MB 880-29556/1-A	Method Blank	Total/NA	Solid	8015B NM	29556
LCS 880-29556/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	29556
LCSD 880-29556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	29556
890-2527-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	29556
890-2527-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	29556

Prep Batch: 29556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Total/NA	Solid	8015NM Prep	
890-2528-2	PH01A	Total/NA	Solid	8015NM Prep	
890-2528-3	PH02	Total/NA	Solid	8015NM Prep	
890-2528-4	PH02A	Total/NA	Solid	8015NM Prep	
890-2528-5	PH03	Total/NA	Solid	8015NM Prep	
890-2528-6	PH03A	Total/NA	Solid	8015NM Prep	
890-2528-7	PH04	Total/NA	Solid	8015NM Prep	
890-2528-8	PH04A	Total/NA	Solid	8015NM Prep	
MB 880-29556/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-29556/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-29556/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2527-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2527-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 29633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Total/NA	Solid	8015 NM	_
890-2528-2	PH01A	Total/NA	Solid	8015 NM	
890-2528-3	PH02	Total/NA	Solid	8015 NM	
890-2528-4	PH02A	Total/NA	Solid	8015 NM	
890-2528-5	PH03	Total/NA	Solid	8015 NM	
890-2528-6	PH03A	Total/NA	Solid	8015 NM	
890-2528-7	PH04	Total/NA	Solid	8015 NM	
890-2528-8	PH04A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 29459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Soluble	Solid	DI Leach	
890-2528-2	PH01A	Soluble	Solid	DI Leach	
890-2528-3	PH02	Soluble	Solid	DI Leach	
890-2528-4	PH02A	Soluble	Solid	DI Leach	
890-2528-5	PH03	Soluble	Solid	DI Leach	
890-2528-6	PH03A	Soluble	Solid	DI Leach	
890-2528-7	PH04	Soluble	Solid	DI Leach	

QC Association Summary

 Client: Ensolum
 Job ID: 890-2528-1

 Project/Site: COLUMBUS 021H & 022H CTB
 SDG: 03D2024001

HPLC/IC (Continued)

Leach Batch: 29459 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-8	PH04A	Soluble	Solid	DI Leach	
MB 880-29459/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-29459/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-29459/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2527-A-7-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2527-A-7-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 29599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2528-1	PH01	Soluble	Solid	300.0	29459
890-2528-2	PH01A	Soluble	Solid	300.0	29459
890-2528-3	PH02	Soluble	Solid	300.0	29459
890-2528-4	PH02A	Soluble	Solid	300.0	29459
890-2528-5	PH03	Soluble	Solid	300.0	29459
890-2528-6	PH03A	Soluble	Solid	300.0	29459
890-2528-7	PH04	Soluble	Solid	300.0	29459
890-2528-8	PH04A	Soluble	Solid	300.0	29459
MB 880-29459/1-A	Method Blank	Soluble	Solid	300.0	29459
LCS 880-29459/2-A	Lab Control Sample	Soluble	Solid	300.0	29459
LCSD 880-29459/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	29459
890-2527-A-7-E MS	Matrix Spike	Soluble	Solid	300.0	29459
890-2527-A-7-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	29459

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Project/Site: COLUMBUS 021H & 022H CTB

Client Sample ID: PH01

Client: Ensolum

Date Collected: 07/08/22 11:50 Date Received: 07/11/22 10:26

Lab Sample ID: 890-2528-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 08:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29760	07/14/22 14:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29633	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 02:07	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 15:11	CH	XEN MID

Client Sample ID: PH01A Lab Sample ID: 890-2528-2 Date Collected: 07/08/22 11:55 **Matrix: Solid**

Date Received: 07/11/22 10:26

Batch Batch Dil Initial Final Batch Prepared Method Number or Analyzed **Prep Type** Type Run **Factor Amount** Amount **Analyst** Lab Total/NA 5035 29670 07/13/22 14:00 MR XEN MID Prep 5.03 g 5 mL Total/NA 8021B 5 mL 29611 07/14/22 09:12 MR XEN MID Analysis 5 mL 1 Total/NA Total BTEX Analysis 1 29760 07/14/22 14:30 SM XEN MID Total/NA 8015 NM 29633 XEN MID Analysis 1 07/13/22 09:45 SM Total/NA Prep 8015NM Prep 10.03 g 10 mL 29556 07/12/22 14:20 DM XEN MID Total/NA 8015B NM 29497 XEN MID Analysis 1 07/13/22 02:29 SM Soluble 50 mL 07/12/22 12:00 SMC Leach DI Leach 5.04 g 29459 XEN MID 300.0 07/13/22 15:35 CH Soluble Analysis 1 29599 **XEN MID**

Client Sample ID: PH02 Lab Sample ID: 890-2528-3 Date Collected: 07/08/22 12:00 **Matrix: Solid**

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 09:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29760	07/14/22 14:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29633	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 02:50	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 15:43	CH	XEN MID

Client Sample ID: PH02A Lab Sample ID: 890-2528-4 Date Collected: 07/08/22 12:05 Matrix: Solid

Date Received: 07/11/22 10:26

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	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 09:53	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29760	07/14/22 14:30	SM	XEN MID

Project/Site: COLUMBUS 021H & 022H CTB

Client Sample ID: PH02A

Client: Ensolum

Date Collected: 07/08/22 12:05 Date Received: 07/11/22 10:26

Lab Sample ID: 890-2528-4

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			29633	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 03:12	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 15:50	CH	XEN MID

Client Sample ID: PH03 Lab Sample ID: 890-2528-5 Date Collected: 07/08/22 12:10 **Matrix: Solid**

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 10:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29760	07/14/22 14:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29633	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 03:33	SM	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 15:58	CH	XEN MID

Client Sample ID: PH03A Lab Sample ID: 890-2528-6 Date Collected: 07/08/22 12:15 **Matrix: Solid**

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 10:34	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29760	07/14/22 14:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29633	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 03:54	SM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 16:06	CH	XEN MID

Client Sample ID: PH04 Lab Sample ID: 890-2528-7 Date Collected: 07/08/22 12:20 Matrix: Solid

Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 10:55	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29760	07/14/22 14:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29633	07/13/22 09:45	SM	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.03 g	10 mL	29556 29497	07/12/22 14:20 07/13/22 04:16		XEN MID XEN MID

Lab Chronicle

 Client: Ensolum
 Job ID: 890-2528-1

 Project/Site: COLUMBUS 021H & 022H CTB
 SDG: 03D2024001

Client Sample ID: PH04

Date Collected: 07/08/22 12:20 Date Received: 07/11/22 10:26 Lab Sample ID: 890-2528-7

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 16:14	CH	XEN MID

Client Sample ID: PH04A

Date Collected: 07/08/22 12:25

Lab Sample ID: 890-2528-8

Matrix: Solid

Date Collected: 07/08/22 12:25 Date Received: 07/11/22 10:26

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	29670	07/13/22 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	29611	07/14/22 11:15	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29760	07/14/22 14:30	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29633	07/13/22 09:45	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	29556	07/12/22 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			29497	07/13/22 04:38	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	29459	07/12/22 12:00	SMC	XEN MID
Soluble	Analysis	300.0		1			29599	07/13/22 16:22	CH	XEN MID

Laboratory References:

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

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Accreditation/Certification Summary

 Client: Ensolum
 Job ID: 890-2528-1

 Project/Site: COLUMBUS 021H & 022H CTB
 SDG: 03D2024001

Laboratory: Eurofins Midland

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

Authority		ogram	Identification Number	Expiration Date
Texas		ELAP	T104704400-22-24	06-30-23
The following analyte:	s are included in this repo	ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for wh
the agency does not	•	,	g aamensy.	This list may include analytes let wi
the agency does not of Analysis Method	•	Matrix	Analyte	The lot may molade analyses is in
0 ,	offer certification.	•	, , ,	

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Method Summary

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2528-1

SDG: 03D2024001

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

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Sample Summary

Client: Ensolum

Project/Site: COLUMBUS 021H & 022H CTB

Job ID: 890-2528-1

SDG: 03D2024001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2528-1	PH01	Solid	07/08/22 11:50	07/11/22 10:26	1
890-2528-2	PH01A	Solid	07/08/22 11:55	07/11/22 10:26	2
890-2528-3	PH02	Solid	07/08/22 12:00	07/11/22 10:26	1
890-2528-4	PH02A	Solid	07/08/22 12:05	07/11/22 10:26	2
890-2528-5	PH03	Solid	07/08/22 12:10	07/11/22 10:26	1
890-2528-6	PH03A	Solid	07/08/22 12:15	07/11/22 10:26	2
890-2528-7	PH04	Solid	07/08/22 12:20	07/11/22 10:26	1
890-2528-8	PH04A	Solid	07/08/22 12:25	07/11/22 10:26	2

City, State ZIP:

Midland, TX 79701

City, State ZIP:

Midland, TX 79701

Bill to: (if different)
Company Name:

Ensolum, LLC

Kalei Jennigns

601 N Marienfeld St Suite 400

601 N Marienfeld St Suite 400

Kalei Jennings Ensolum, LLC

Project Manager:
Company Name:
Address:

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Chain of Custody

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

Xenco

Environment Testing

Work Order No:
www.xenco.com Page 2 of 2
Work Order Comments
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II Level III PST/UST TRRP Level IV
Deliverables: EDD ☐ ADaPT ☐ Other:
Preservative Codes

Phone: 8	817-683-2503 Columbus 021H & 022H CTB	21H & 02	2H CTB	Email Tun	Email: kjennings@ensolum.com Turn Around	@enso	lum.cc	m			ANALYSIS REQUEST
Project Number:	Columbus 02 03D2	03D2024001	210	Routine	Rush	0.70	Pres.		4		
Project Location:				Due Date:	3 Day TAT						
Sampler's Name:	Conn	Conner Shore		TAT starts th	TAT starts the day received by	ed by				_	
SAMDI E RECEIPT	DT Tomo Blank:	יאראלי	No.	Wet Ice	3		eter)	4	4	
Samples Received Intact:	+	\perp	Thermometer ID:	er iD:		3		300.			-
Cooler Custody Seals:	<u></u>		Correction Factor:	actor:	0-	N		PA:	4	_	
Sample Custody Seals:		NIR	Temperature Reading:	e Reading:	4.5			5 (E	_	4	890-2528
Total Containers:		4	Corrected T	Corrected Temperature:	7	0			015)	8021	_
Sample Identification	tification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ # of Comp Cont		CHLOR	TPH (80	BTEX (
SS04A	Ā	S	07.08.22	1150	-1-	ര		×	×	×	
SS04B	B	S	07.08.22	1155	72	ଜ		×	×	×	
SS05A	Š	ഗ	07.08.22	1200	7	ြ	-	×	×	×	
SS05B	3B	S	07.08.22	1205	2	G	-7	×	×	×	
SS08A	3A	S	07.08.22	1210	- <u>;</u>	ဝ		×	×	×	
SS08B	œ	S	07.08.22	1215	2'	ြ	-	×	×	×	
SS06A	Ä	S	07.08.22	1220	1	ဓ		×	×	×	
SS06B	ö	S	07.08.22	1225	2	၈	-	×	×	×	
		1				_	-	_	_	-	
1/4	\					L	_	_	L		
Total 200.7 / 6010	10 200.8 / 6020:	020:	3	BRCRA 13	13PPM Tex	Texas 11	Al Sb As		Ba Be	Φ	Cd Ca Cr Co Cu Fe
Circle Method(s) and Metal(s) to be analyzed	nd Metal(s) to b	e analyz	èd	TCLP/	TCLP / SPLP 6010: 8RCRA): 8RCF	11	Sb As	Ba	Be Cd	Cr Co Cu Pb Mn
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 negotiate	document and reling to will be liable only ilmum charge of \$85	uishment of for the cos	of samples cou t of samples a applied to eac	nstitutes a valid and shall not as h project and a	d purchase or sume any res charge of \$5	der from c ponsibility for each s	lient con / for any ample su	npany t losses ubmitte	o Eurof or expe	ns Xeno	o, its affiliates and subcourred by the client if sucence, but not analyzed. The
Relinquished by: (Signature)	: (Signature)		Receive	Received by: (Signature	ature)		0	Date/Time	ime		Relinquished by: (Sig
CV		A.	alarana .	8	Puf.	7	celastr	2	16	2	
nΙω					,	-				4 0	
						-				-	

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2528-1 SDG Number: 03D2024001

Login Number: 2528 **List Source: Eurofins Carlsbad**

List Number: 1 Creator: Clifton, Cloe

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

Released to Imaging: 9/20/2022 11:45:39 AM

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2528-1 SDG Number: 03D2024001

Login Number: 2528 **List Source: Eurofins Midland** List Creation: 07/12/22 11:11 AM List Number: 2

Creator: Rodriguez, Leticia

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	N/A	

<6mm (1/4").



APPENDIX E

NMOCD Notifications

From: Nobui, Jennifer, EMNRD

To: <u>Kalei Jennings</u>

Cc: Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD

Subject: FW: [EXTERNAL] Sampling Notification (Week of 06/13/22-06/17/22)

Date: Wednesday, June 8, 2022 5:31:39 PM

Attachments: <u>image001.png</u>

image002.png image003.png image004.png

[**EXTERNAL EMAIL**]

Kalei

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,

Jennifer Nobui

From: Enviro, OCD, EMNRD < OCD. Enviro@state.nm.us>

Sent: Wednesday, June 8, 2022 4:21 PM

To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>

Subject: Fw: [EXTERNAL] Sampling Notification (Week of 06/13/22-06/17/22)

From: Kalei Jennings < <u>kiennings@ensolum.com</u>>

Sent: Wednesday, June 8, 2022 4:11 PM

To: Enviro, OCD, EMNRD < OCD. Enviro@state.nm.us >

Subject: [EXTERNAL] Sampling Notification (Week of 06/13/22-06/17/22)

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

All,

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

Monday

Columbus Fed 021 & 022H CTB / NAPP2203830124

Tuesday

- Battle Axe Federal Com 002H / NAPP2134740531
- Broadcaster 29 Federal 3H / NAPP2201938653 & NAPP2132773092

- Super Cobra State Com #001H / NAPP2211531225
- Raspberry State Com 001H / NAPP2213029810

Wednesday

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

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Thursday

Friday

Thank you,



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



APPENDIX F

Final C-141

Received by OCD: 2/7/2022 8:31:15 AM

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

MA 98:84:11 2202/02/9:30 anizomi of basadana

Incident ID	NAPP2203830124
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Kelsy Waggaman	Contact Telephone	(432) 688-9057
Contact email	Kelsy.Waggaman@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2203830124
Contact mailing address	600 West Illinois Avenue, Midlar	nd, Texas 79701	

			Location of I	Release Source	2
Latitude	32.092	222		Longitude	03.55556
			(NAD 83 in decimal a	legrees to 5 decimal place	(3)
Site Name		Columbus Fede	eral 021H & 022H CTE	Site Type	Tank Battery
Date Release	Discovered	January 22	, 2022	API# (if applicable)	
Unit Letter	Section	Township	Range	County	
Α	34	25S	33E	Lea	
Surface Owne	er: State	Federal Tr	ribal T Private (<i>Name</i> .	Brown Sa	ndra Rudy ET AL

Nature and Volume of Release

Materia Crude Oil	l(s) Released (Select all that apply and attach calculations or specific Volume Released (bbls) 1.6	Volume Recovered (bbls)
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		
	nused by a flare fire. ered due to the fire burning off and standi	ng fluid. The release resulted in a flare fire

Received by OCD: 2/7/2022 8:31:15 AM State of New Mexico
Page 2 Oil Conservation Division

WV 68:54:11 770	Z/OZ/6 : SuiSvui of posvojon
Incident ID	NAPP2203830124
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the respon	nsible party consider this a major release?
release as defined by	The release involved a fire.	
19.15.29.7(A) NMAC?		
■ Yes □ No		
If YES, was immediate no	otice given to the OCD? By whom? To wh	iom? When and by what means (phone, email, etc)?
Immediate notice w	as given by Kelsy Waggaman via	e-mail January 23, 2022 at 4:22 pm to
ocd.enviro@state.n	m.us.	·
	Initial Ro	esponse
The responsible p	party must undertake the following actions immediatel	y unless they could create a safety hazard that would result in injury
■ The source of the rele	ease has been stopped.	
The impacted area ha	as been secured to protect human health and	the environment.
Released materials ha	ave been contained via the use of berms or c	likes, absorbent pads, or other containment devices.
	ecoverable materials have been removed and	
	d above have <u>not</u> been undertaken, explain v	
	<u></u> 20011 unad tunen, emplum	····
D 10.15.20.0 D (4) ND	IAC d	
		emediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred
		lease attach all information needed for closure evaluation.
I hereby certify that the info	rmation 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 noti	fications and perform corrective actions for releases which may endanger
public health or the environic failed to adequately investig	ate and remediate contamination that pose a thre	CD does not relieve the operator of liability should their operations have at to groundwater, surface water, human health or the environment. In
addition, OCD acceptance o		responsibility for compliance with any other federal, state, or local laws
and/or regulations.	N E	Consider the second of the second of the second
Printed Name. Brittar	ıy N. Esparza	Title: Environmental Technician
Signature: But	ny N. Esparza	Date: 2/7/2022 Telephone: (432) 221-0398
Brittany.Espar	za@ConocoPhillips.com	(432) 221-0398
email:		Telephone: (102) 221 0000
OCD Only		
•		_ 2/12/2022
Received by: Ramona M	1arcus	Date: 2/13/2022

	Received	
	by	
	OCD:	
	7/21/2022 4	
	022	
_	4:4	
Page 3 of	3	

L48 S	pill Vo	lume l	Estimate	Form
-------	---------	--------	----------	------

No. 1 II con				L46 Spill Volume	2 Estimate Form	4
Received by OCD:	2/7/2022 8:3	31:15 AW lity Name & Number:	Columbus Fee 21-	-22		Page 3 of
5:3		Asset Area:			NAPP2203830)124
9	F	Release Discovery Date & Time:	1/22/2022 0:30			2
X		Release Type:	Oil		4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.	
	Provide any	known details about the event:	Appears heater lo	ost pressure and sent fluid down gas	line to flare	
				Spill Calculation - Subsu	urface Spill - Rectangle	
	Was	s the release on pad or off-pad?			See reference table	e below
Has it r	rained at least	a half inch in the last 24 hours?	<u></u>		See reference table	e below
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	162.0	33.0	0.10	15.12%	7.930	1.199
Rectangle B	81.0	33.0	0.10	10.50%	3.965	0.416
Rectangle C					0.000	0.000
Rectangle D					0.000	0.000
Rectangle E					0.000	0.000
Rectangle F					0.000	0.000
Rectangle G					0.000	0.000
Rectangle H					0.000	0.000
Rectangle I					0.000	0.000
Refeased to Imagin	10: 2/13/202	2 10:45:47 AM			0.000	0.000
	6.				Total Volume Release:	1.615

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

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 78884

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
	Action Number:
Midland, TX 79701	78884
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Cre	eated By	Condition	Condition Date
rn	marcus	None	2/13/2022

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Incident ID NAPP2203830124
District RP
Facility ID
Application ID

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)		
Did this release impact groundwater or surface water?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No		
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No		
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No		
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No		
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No		
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No		
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No		
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No		
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No		
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ⊠ No		
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.			
Characterization Report Checklist: Each of the following items must be included in the report.			
 Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well 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 	lls.		

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.

Received by OCD: 7/21/2022 4:47:03 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

	Page 141 of 1	43
Incident ID	NAPP2203830124	
District RP		
Facility ID		
Application ID		

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.				
Printed Name:Charles Beauvais	Title:Senior Environmental Engineer			
Signature: Charles R. Beauvais 99	Date:07/21/2022			
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043			
OCD Only				
Received by:	Date:			

Received by OCD: 7/21/2022 4:47:03 PM Form C-141 State of New Mexico Oil Conservation Division Page 6

Page 142 of 143 NAPP2203830124

Incident ID District RP Facility ID Application ID

Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.			
A scaled site and sampling diagram as described in 19.15.29.1	1 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 ODG	C District office must be notified 2 days prior to final sampling)		
□ Description of remediation activities			
may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rendaman health or the environment. In addition, OCD acceptance of	ntions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete. Title: _Senior Environmental Engineer		
email:Charles.R.Beauvais@conocophillips.com	Telephone:5/5-988-2043		
OCD Only			
Received by:	Date:		
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.		
Closure Approved by:	Date:09/20/2022		
Printed Name:Jennifer Nobui	Title: Environmental Specialist A		

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

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1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

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 127936

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	127936
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By		Condition Date
jnobui	Closure Report Approved.	9/20/2022