ENSOLUM

November 23, 2022

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

Re: Closure Request
MCA 2A Main Line
Incident Number NAPP2225231205
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Permian, LLC (Maverick), has prepared this *Closure Request* to document site assessment, excavation, and soil sampling activities performed at the MCA 2A Main Line (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water and crude oil within the pasture area at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2225231205.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit H, Section 29, Township 17 South, Range 32 East, in Lea County, New Mexico (32.807923° N, 103.784172° W) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On September 1, 2022, a pipeline leaked due to internal corrosion resulting in the release of approximately 35.1 barrels (bbls) of produced water and 0.4 bbls of crude oil into the surrounding pasture. Released fluids were unable to be recovered. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on September 8, 2022. The release was assigned Incident Number NAPP2225231205.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table I, 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 between 50 and 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 RA-12020-POD1 located approximately 3,328 feet northeast of the Site. The groundwater well has a reported depth to groundwater of 81 feet bgs and a total depth of 120 feet bgs. The Site is located on the west flank of Mescalero Ridge. Topography falls steeply off of the caprock and begins to flatten toward the Querecho Plains. Groundwater wells show a clear trend of deeper water (greater than 100 feet bgs) on and near the top of the caprock with a gradual shallowing pattern toward the flatter plains where groundwater is consistently between 50 and 100 feet bgs (Figure 1). Documented depth to water along the caprock range from 130 feet bgs to 202 feet bgs. Groundwater wells at lower elevations on the plains east of the Site document depth to groundwater ranging between 75 feet bgs and 124 feet bgs. Depth to groundwater at the Site likely falls somewhere between this range. Nowhere within 3 miles of the Site has documented groundwater shallower than 50 feet bgs and there are no surface features, such as watercourses, ponds, wetlands, or vegetation indicative of shallow groundwater. The Site is not located in a known karst area, lowering the possibility of voids and conduits for storage of shallow groundwater. Based on the number of wells from the Site, a consistent pattern of depth to groundwater that corresponds to topography and, therefore, underlying geology, and the location along the flank of Mescalero Ridge, it is evident that groundwater is deep and a conservative estimate of between 50 and 100 feet bgs is estimated. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a tributary-Pecos River, located approximately 16 miles west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture 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.

INITIAL SITE ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On September 1, 2022, personnel were at the Site to complete Site assessment activities based on information provided on the Form C-141 and visible surface staining observed in the pasture release area. Four soil samples (SS01 through SS04) were collected within the release extent at a depth of 0.5 feet bgs to assess the lateral extent of the release.

The soil samples were field screened for volatile aromatic hydrocarbons utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

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

Laboratory analytical results for soil samples SS01 through SS04 indicated TPH and/or chloride concentrations exceeded the reclamation requirement of the pasture area that was affected by the release; thus, excavation activities were warranted to address waste-containing soil. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between September 2, 2022 and October 4, 2022, Ensolum personnel were onsite to oversee excavation activities based on surface staining observed in the pasture release area and laboratory analytical results for SS01 through SS04. Waste-containing soil was excavated from the release area as indicated by visible staining, field screening activities, and laboratory analytical results. Excavation activities were performed via track-mounted track hoe and transport vehicles. To direct excavation activities, soil was field screened for volatile aromatic hydrocarbons and chloride. The excavation was completed to a depth of 4 feet bgs. Photographic documentation is included in Appendix B.

Following removal of waste-containing soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS16 were collected from the floor of the excavation at a depth of 4 feet bgs. Composite soil samples SW01 through SW07 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 4 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation measured approximately 3,250 square feet in areal extent. A total of approximately 485 cubic yards of waste-containing soil was removed during the excavation activities. The soil was transported and properly disposed of at the R360 Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

Laboratory analytical results for excavation floor samples FS01 through FS16 and excavation sidewall samples SW01 through SW07 indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement where applicable. Laboratory analytical results

are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

CLOSURE REQUEST

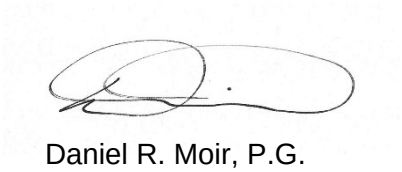
Site assessment and excavation activities were conducted at the Site to address the September 1, 2022, release of produced water and crude oil. Laboratory analytical results for the excavation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement where applicable. Based on the soil sample analytical results, no further remediation was required. Maverick will backfill the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The disturbed pasture area will be re-seeded with an approved BLM seed mixture.

Excavation of waste-containing soil supported efforts to reclaim this Site following the September 2022 release. Depth to groundwater has been conservatively estimated to be between 51 feet and 100 feet bgs and no sensitive receptors were identified near the release extent. Maverick believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2225231205. The Final C-141 is included in Appendix D.

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: Bryce Wagoner, Maverick Permian, LLC
Bureau of Land Management

Appendices:

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

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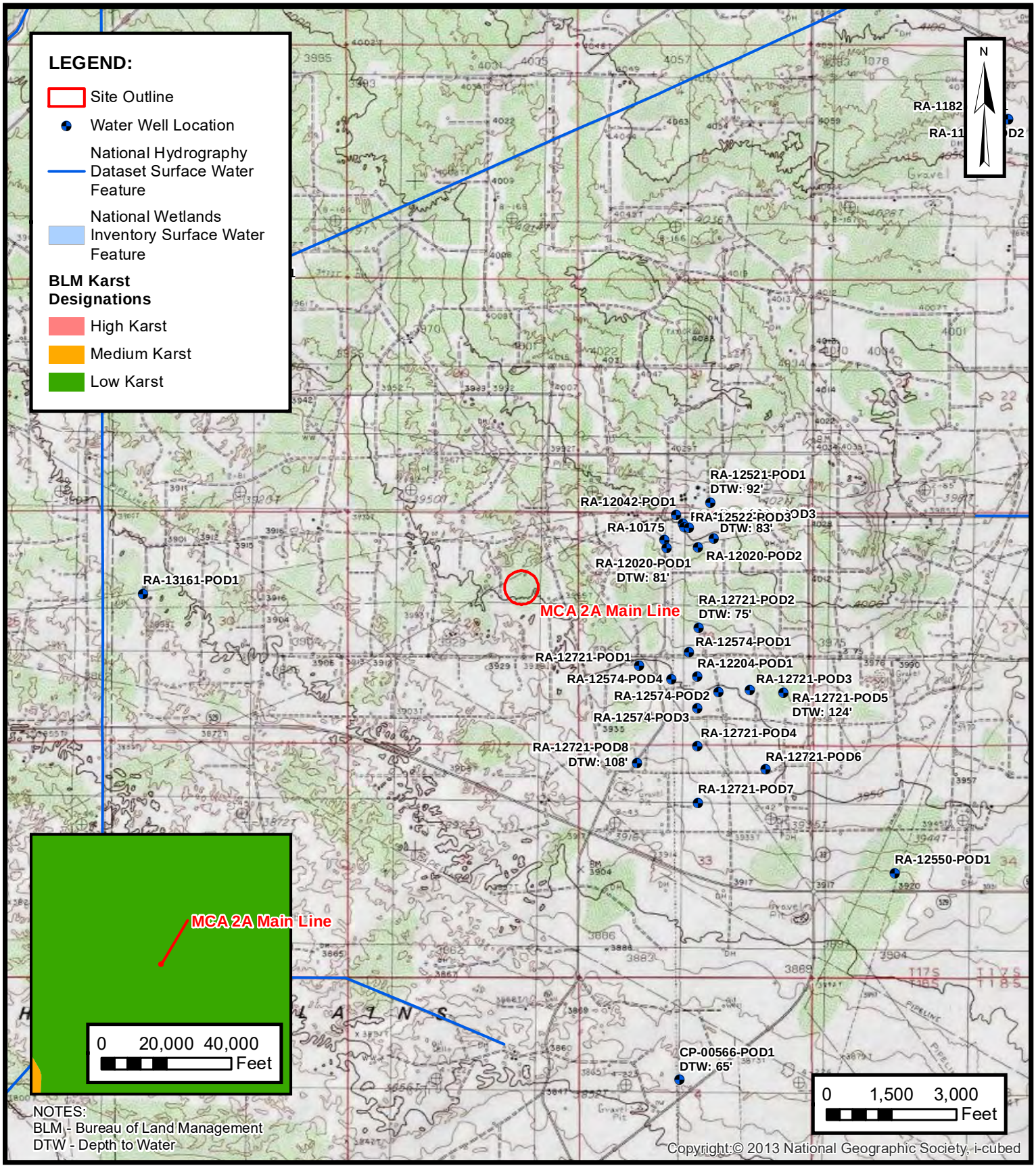
FIGURES



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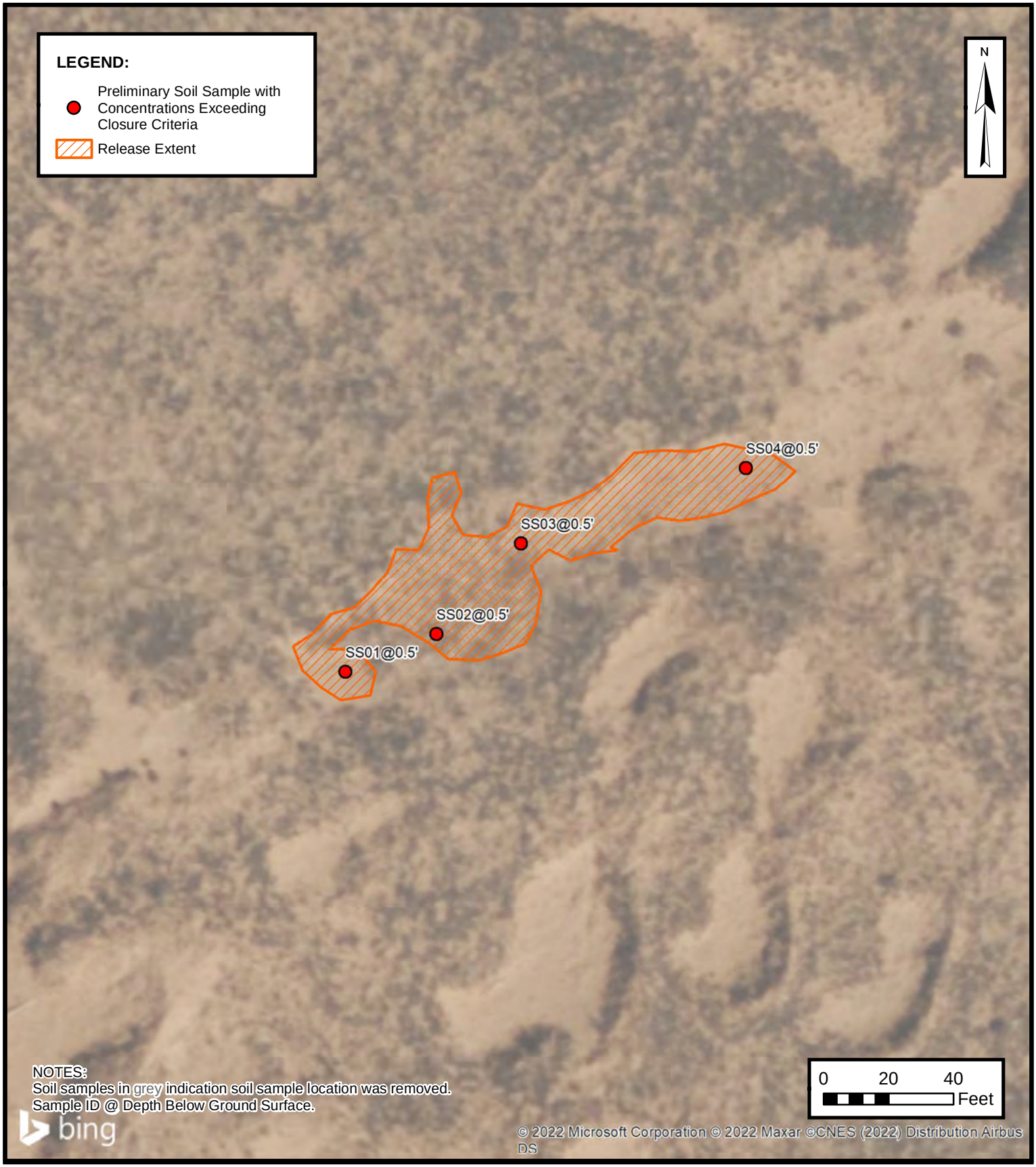
SITE RECEPTOR MAP

MAVERICK NATURAL RESOURCES, LLC
MCA 2A MAIN LINE
Incident Number NAPP2225231205
Unit H, Sec 29, T17S, R32E
Lea County, New Mexico

FIGURE
1



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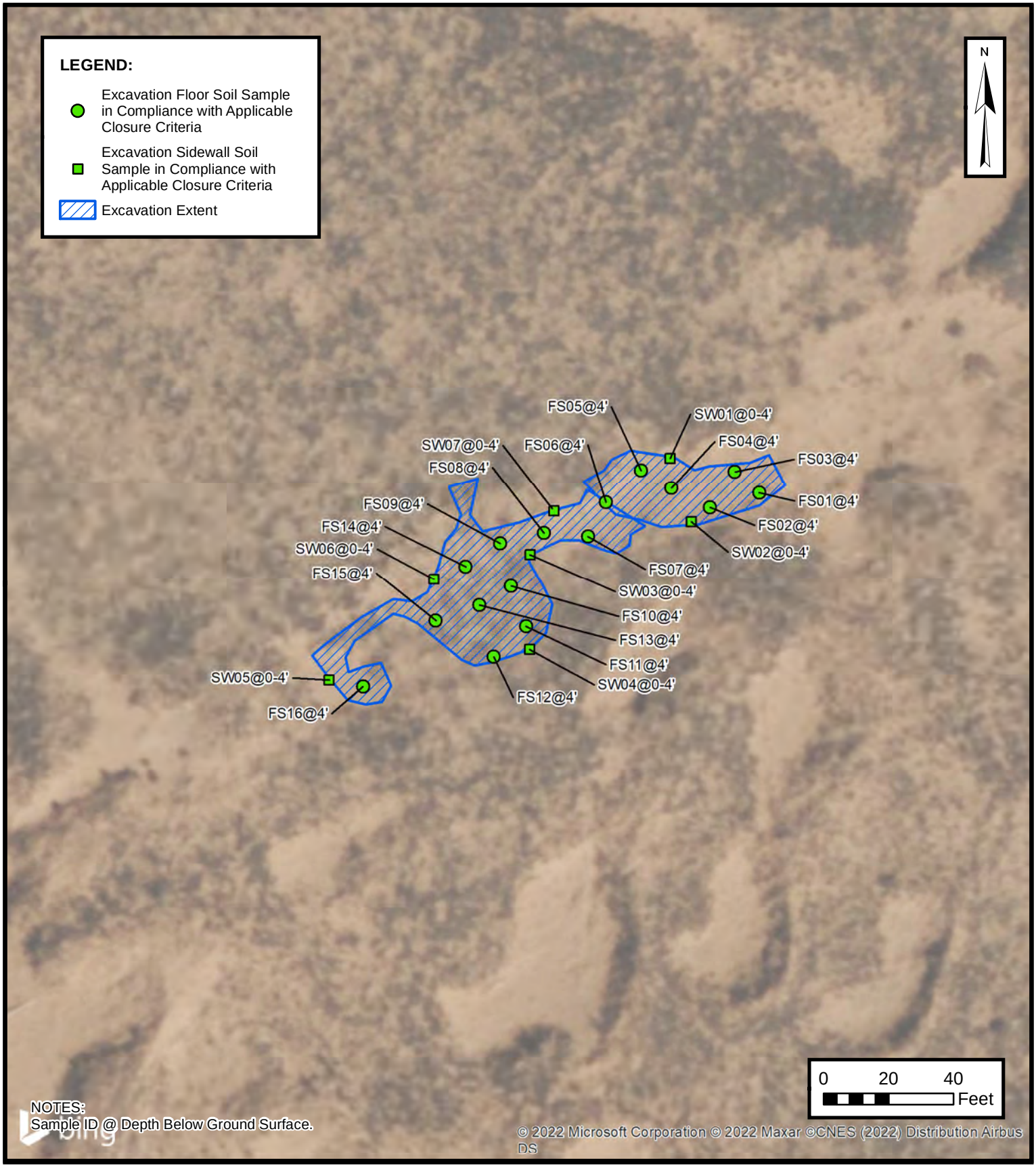
SOIL SAMPLE LOCATIONS

MAVERICK NATURAL RESOURCES, LLC
MCA 2A MAIN LINE
NAPP2225231205
Unit H, Sec 29, T17S, R32E
Lea County, New Mexico

FIGURE
2



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EXCAVATION SOIL SAMPLE LOCATIONS

MAVERICK NATURAL RESOURCES, LLC
MCA 2A MAIN LINE
NAPP2225231205
Unit H, Sec 29, T17S, R32E
Lea County, New Mexico

FIGURE
3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MCA 2A Main Line
Maverick Natural Resources, 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 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Preliminary Soil Samples										
SS01	09/01/2022	0.5	<0.0990	<0.198	<49.9	53.4	<49.9	53.4	53.4	7,610*
SS02	09/01/2022	0.5	<0.100	<0.200	<49.8	107	<49.8	107	107	**12,500***
SS03	09/01/2022	0.5	<0.100	0.257	<50.0	252	<50.0	252	252	**11,000***
SS04	09/01/2022	0.5	<0.0998	<0.200	<49.9	<49.9	<49.9	<49.9	<49.9	9,620*
Excavation Floor Samples										
FS01	09/28/2022	4	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	5,130
FS02	09/28/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	5,850
FS03	09/28/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	5,470
FS04	09/28/2022	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	6,700
FS05	09/28/2022	4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	7,390
FS06	10/04/2022	4	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	2,300
FS07	10/04/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	5,210
FS08	10/04/2022	4	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	4,240
FS09	10/04/2022	4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	4,620
FS10	10/04/2022	4	<0.00200	<0.00401	<49.9	201	<49.9	201	201	5,130
FS11	10/04/2022	4	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	2,530
FS12	10/04/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	4,150
FS13	10/04/2022	4	<0.00199	<0.00398	<49.9	57.3	<49.9	57.3	57.3	3,600
FS14	10/04/2022	4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	3,500
FS15	10/04/2022	4	<0.00198	<0.00396	<50.0	91.9	<50.0	91.9	91.9	3,190
FS16	10/04/2022	4	<0.00201	<0.00402	<49.8	58.8	<49.8	58.8	58.8	3,180
Excavation Sidewall Samples										
SW01	10/04/2022	0-4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	22.9*
SW02	10/04/2022	0-4	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	20.7*
SW03	10/04/2022	0-4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	19.7*
SW04	10/04/2022	0-4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	24.1*
SW05	10/04/2022	0-4	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	21.8*
SW06	10/04/2022	0-4	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	21.4*
SW07	10/04/2022	0-4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	22.7*

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
NMAC: New Mexico Administrative Code
Grey text represents samples that have been excavated
"* 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"

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APPENDIX A

Referenced Well Records

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: RA 12020 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: PHILLIPS 66 COMPANY

Contact: TOM WYNN

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	534328	EXPL	2013-09-20	PMT	LOG	RA 12020	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
RA 12020 POD1		Shallow	2	2	1	28	17S	32E	614828	3630954	MW-21
RA 12020 POD2			3	1	2	28	17S	32E	615046	3630960	
RA 12020 POD3		Shallow	2	1	2	28	17S	32E	615152	3631019	MW-23

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 12020 POD1	2	2	1	28	17S	32E	614828	3630954

Driller License: 1456 **Driller Company:** WHITE DRILLING COMPANY

Driller Name: WHITE, JOHN (LD)

Drill Start Date: 09/24/2013 **Drill Finish Date:** 09/25/2013 **Plug Date:**

Log File Date: 10/07/2013 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 2.00 **Depth Well:** 120 feet **Depth Water:** 81 feet

Water Bearing Stratifications:	Top	Bottom	Description
	70	111	Sandstone/Gravel/Conglomerate
	111	120	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	75	110

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APPENDIX B

Photographic Log

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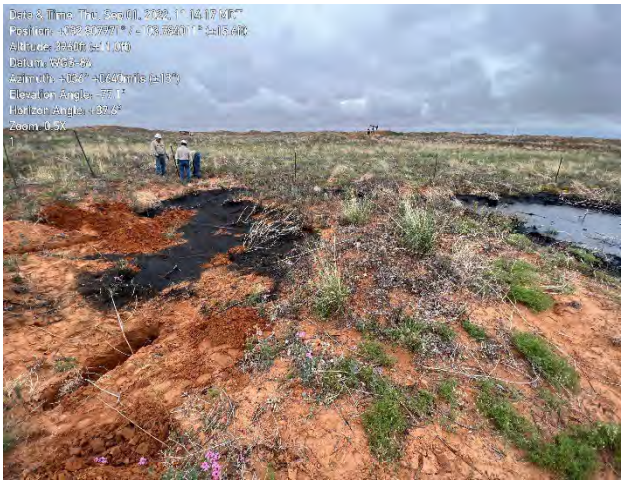
Photographic Log
Maverick Permian, LLC
MCA 2A Main Line
NAPP2225231205

Photograph 1 Date: 9/1/2022
Description: Northeast view of release area

Photograph 2 Date: 9/1/2022
Description: Northeast view of release area

Photograph 3 Date: 9/1/2022
Description: West view of release area



Photograph 4 Date: 9/1/2022
Description: East view of release area

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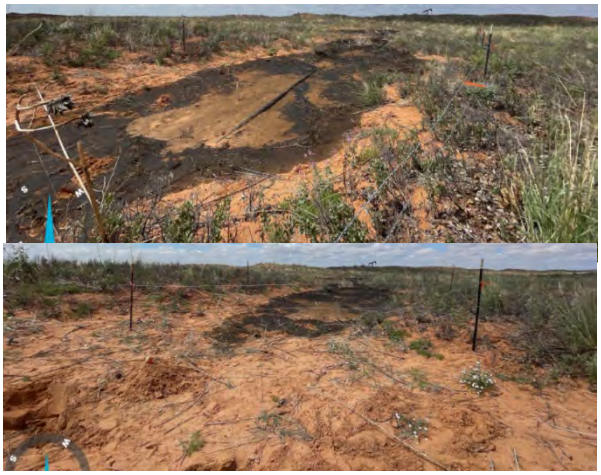
Photographic Log
Maverick Permian, LLC
MCA 2A Main Line
NAPP2225231205

Photograph 5 Date: 9/2/2022
Description: Northeast view of release area following initial response

Photograph 6 Date: 9/2/2022
Description: Northeast view of release area following initial response

Photograph 7 Date: 9/2/2022
Description: South view of release area following initial response



Photograph 8 Date: 9/2/2022
Description: Southwest view of release area following initial response

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Photographic Log
Maverick Permian, LLC
MCA 2A Main Line
NAPP2225231205

Photograph 9 Date: 9/23/2022
Description: East view during remediation

Photograph 10 Date: 9/23/2022
Description: Southwest view during remediation

Photograph 11 Date: 9/23/2022
Description: East view during remediation

Photograph 12 Date: 9/23/2022
Description: Southwest view during remediation

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Photographic Log
Maverick Permian, LLC
MCA 2A Main Line
NAPP2225231205

Photograph 9 Date: 10/4/2022

Description: Northeast view during remediation

Photograph 10 Date: 10/4/2022

Description: Northeast view during remediation

Photograph 11 Date: 10/4/2022

Description: Southeast view during remediation

Photograph 12 Date: 10/4/2022

Description: Southeast view during remediation

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APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2877-1
Laboratory Sample Delivery Group: 03D2057023
Client Project/Site: MCA 2A Header Main Line

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/12/2022 9:19:43 AM

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

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

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

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Laboratory Job ID: 890-2877-1
SDG: 03D2057023

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Job ID: 890-2877-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2877-1

Receipt
The samples were received on 9/1/2022 1:49 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34107 and analytical batch 880-34153 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-2877-1), SS02 (890-2877-2), SS03 (890-2877-3) and SS04 (890-2877-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The following samples were diluted due to the nature of the sample matrix: SS01 (890-2877-1), SS02 (890-2877-2), SS03 (890-2877-3) and SS04 (890-2877-4). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33565/2-A) and (LCSD 880-33565/3-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Client Sample ID: SS01

Lab Sample ID: 890-2877-1
Matrix: Solid
Date Collected: 09/01/22 11:15
Date Received: 09/01/22 13:49
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0990	U	0.0990		mg/Kg		09/09/22 12:37	09/11/22 01:39	50
Toluene	<0.0990	U	0.0990		mg/Kg		09/09/22 12:37	09/11/22 01:39	50
Ethylbenzene	<0.0990	U	0.0990		mg/Kg		09/09/22 12:37	09/11/22 01:39	50
m-Xylene & p-Xylene	<0.198	U	0.198		mg/Kg		09/09/22 12:37	09/11/22 01:39	50
o-Xylene	<0.0990	U	0.0990		mg/Kg		09/09/22 12:37	09/11/22 01:39	50
Xylenes, Total	<0.198	U	0.198		mg/Kg		09/09/22 12:37	09/11/22 01:39	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*09/09/22 12:37*	*09/11/22 01:39*	*50*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:37*	*09/11/22 01:39*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.198	U	0.198		mg/Kg			09/12/22 09:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**53.4**		49.9		mg/Kg			09/06/22 10:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/02/22 15:50	09/03/22 03:07	1
Diesel Range Organics (Over C10-C28)	**53.4**		49.9		mg/Kg		09/02/22 15:50	09/03/22 03:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:50	09/03/22 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*09/02/22 15:50*	*09/03/22 03:07*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/02/22 15:50*	*09/03/22 03:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7610**		49.8		mg/Kg			09/07/22 19:02	10

Client Sample ID: SS02

Lab Sample ID: 890-2877-2
Matrix: Solid
Date Collected: 09/01/22 11:20
Date Received: 09/01/22 13:49
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100	U	0.100		mg/Kg		09/09/22 12:37	09/11/22 02:00	50
Toluene	<0.100	U	0.100		mg/Kg		09/09/22 12:37	09/11/22 02:00	50
Ethylbenzene	**0.160**		0.100		mg/Kg		09/09/22 12:37	09/11/22 02:00	50
m-Xylene & p-Xylene	<0.200	U	0.200		mg/Kg		09/09/22 12:37	09/11/22 02:00	50
o-Xylene	<0.100	U	0.100		mg/Kg		09/09/22 12:37	09/11/22 02:00	50
Xylenes, Total	<0.200	U	0.200		mg/Kg		09/09/22 12:37	09/11/22 02:00	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*	*09/09/22 12:37*	*09/11/22 02:00*	*50*

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Client Sample ID: SS02

Date Collected: 09/01/22 11:20
Date Received: 09/01/22 13:49
Sample Depth: 0.5

Lab Sample ID: 890-2877-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*09/09/22 12:37*	*09/11/22 02:00*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.200	U	0.200	mg/Kg			09/12/22 09:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**107**		49.8	mg/Kg			09/06/22 10:41	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/02/22 15:50	09/03/22 03:50	1
Diesel Range Organics (Over C10-C28)	**107**		49.8	mg/Kg		09/02/22 15:50	09/03/22 03:50	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/02/22 15:50	09/03/22 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*09/02/22 15:50*	*09/03/22 03:50*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/02/22 15:50*	*09/03/22 03:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12500**		100	mg/Kg			09/08/22 11:41	20

Client Sample ID: SS03

Date Collected: 09/01/22 11:25
Date Received: 09/01/22 13:49
Sample Depth: 0.5

Lab Sample ID: 890-2877-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100	U	0.100	mg/Kg		09/09/22 12:37	09/11/22 02:20	50
Toluene	**0.138**		0.100	mg/Kg		09/09/22 12:37	09/11/22 02:20	50
Ethylbenzene	**0.119**		0.100	mg/Kg		09/09/22 12:37	09/11/22 02:20	50
m-Xylene & p-Xylene	<0.201	U	0.201	mg/Kg		09/09/22 12:37	09/11/22 02:20	50
o-Xylene	<0.100	U	0.100	mg/Kg		09/09/22 12:37	09/11/22 02:20	50
Xylenes, Total	<0.201	U	0.201	mg/Kg		09/09/22 12:37	09/11/22 02:20	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*09/09/22 12:37*	*09/11/22 02:20*	*50*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/09/22 12:37*	*09/11/22 02:20*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.257**		0.201	mg/Kg			09/12/22 09:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**252**		50.0	mg/Kg			09/06/22 10:41	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Client Sample ID: SS03

Lab Sample ID: 890-2877-3
Matrix: Solid
Date Collected: 09/01/22 11:25
Date Received: 09/01/22 13:49
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/02/22 15:50	09/03/22 04:12	1
Diesel Range Organics (Over C10-C28)	**252**		50.0		mg/Kg		09/02/22 15:50	09/03/22 04:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/02/22 15:50	09/03/22 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*09/02/22 15:50*	*09/03/22 04:12*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/02/22 15:50*	*09/03/22 04:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11000**		101		mg/Kg			09/08/22 11:46	20

Client Sample ID: SS04

Lab Sample ID: 890-2877-4
Matrix: Solid
Date Collected: 09/01/22 11:30
Date Received: 09/01/22 13:49
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0998	U	0.0998		mg/Kg		09/09/22 12:37	09/11/22 02:40	50
Toluene	**0.169**		0.0998		mg/Kg		09/09/22 12:37	09/11/22 02:40	50
Ethylbenzene	<0.0998	U	0.0998		mg/Kg		09/09/22 12:37	09/11/22 02:40	50
m-Xylene & p-Xylene	<0.200	U	0.200		mg/Kg		09/09/22 12:37	09/11/22 02:40	50
o-Xylene	<0.0998	U	0.0998		mg/Kg		09/09/22 12:37	09/11/22 02:40	50
Xylenes, Total	<0.200	U	0.200		mg/Kg		09/09/22 12:37	09/11/22 02:40	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*157*	*S1+*	*70 - 130*	*09/09/22 12:37*	*09/11/22 02:40*	*50*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*09/09/22 12:37*	*09/11/22 02:40*	*50*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.200	U	0.200		mg/Kg			09/12/22 09:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/06/22 10:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/02/22 15:50	09/03/22 03:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/02/22 15:50	09/03/22 03:29	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/02/22 15:50	09/03/22 03:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*09/02/22 15:50*	*09/03/22 03:29*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/02/22 15:50*	*09/03/22 03:29*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Client Sample ID: SS04
Date Collected: 09/01/22 11:30
Date Received: 09/01/22 13:49
Sample Depth: 0.5

Lab Sample ID: 890-2877-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9620		50.1		mg/Kg			09/07/22 19:27	10

Surrogate Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-2865-A-1-C MS	Matrix Spike	85	92
890-2865-A-1-D MSD	Matrix Spike Duplicate	116	98
890-2877-1	SS01	143 S1+	80
890-2877-2	SS02	149 S1+	83
890-2877-3	SS03	135 S1+	101
890-2877-4	SS04	157 S1+	80
LCS 880-34107/1-A	Lab Control Sample	103	107
LCSD 880-34107/2-A	Lab Control Sample Dup	132 S1+	105
MB 880-34107/5-A	Method Blank	96	89

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2861-A-1-C MS	Matrix Spike	119	92
890-2861-A-1-D MSD	Matrix Spike Duplicate	121	97
890-2877-1	SS01	122	107
890-2877-2	SS02	122	117
890-2877-3	SS03	130	116
890-2877-4	SS04	114	102
LCS 880-33565/2-A	Lab Control Sample	152 S1+	123
LCSD 880-33565/3-A	Lab Control Sample Dup	156 S1+	130
MB 880-33565/1-A	Method Blank	124	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34107/5-A
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34107

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/22 12:37	09/10/22 19:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/09/22 12:37	09/10/22 19:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:08*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*09/09/22 12:37*	*09/10/22 19:08*	*1*

Lab Sample ID: LCS 880-34107/1-A
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34107

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08977		mg/Kg		90	70 - 130		
Toluene			0.100	0.08000		mg/Kg		80	70 - 130		
Ethylbenzene			0.100	0.07969		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene			0.200	0.1624		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.09238		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-34107/2-A
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34107

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09121		mg/Kg		91	70 - 130	2	35
Toluene			0.100	0.08741		mg/Kg		87	70 - 130	9	35
Ethylbenzene			0.100	0.1010		mg/Kg		101	70 - 130	24	35
m-Xylene & p-Xylene			0.200	0.2099		mg/Kg		105	70 - 130	26	35
o-Xylene			0.100	0.1206		mg/Kg		121	70 - 130	26	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-2865-A-1-C MS
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.0998	0.03247	F1	mg/Kg		33	70 - 130		
Toluene	<0.00201	U F1	0.0998	0.03634	F1	mg/Kg		36	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

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

Lab Sample ID: 890-2865-A-1-C MS
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1 F2	0.0998	0.03705	F1	mg/Kg		37	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.07196	F1	mg/Kg		36	70 - 130
o-Xylene	<0.00201	U F1 F2	0.0998	0.04226	F1	mg/Kg		42	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-2865-A-1-D MSD
Matrix: Solid
Analysis Batch: 34153

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0996	0.04628	F1	mg/Kg		46	70 - 130	35	35
Toluene	<0.00201	U F1	0.0996	0.04928	F1	mg/Kg		49	70 - 130	30	35
Ethylbenzene	<0.00201	U F1 F2	0.0996	0.05680	F1 F2	mg/Kg		57	70 - 130	42	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.199	0.1146	F1 F2	mg/Kg		58	70 - 130	46	35
o-Xylene	<0.00201	U F1 F2	0.0996	0.06608	F1 F2	mg/Kg		66	70 - 130	44	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/01/22 15:50	09/02/22 19:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/01/22 15:50	09/02/22 19:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/01/22 15:50	09/02/22 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	846.8		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	1000	876.5		mg/Kg		88	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

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

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	152	S1+	70 - 130
o-Terphenyl	123		70 - 130

Lab Sample ID: LCSD 880-33565/3-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.2		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	909.9		mg/Kg		91	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	156	S1+	70 - 130
o-Terphenyl	130		70 - 130

Lab Sample ID: 890-2861-A-1-C MS
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	989.5		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1046		mg/Kg		105	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-2861-A-1-D MSD
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1037		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1069		mg/Kg		107	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33690/1-A
Matrix: Solid
Analysis Batch: 33886

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/07/22 16:56	1

Lab Sample ID: LCS 880-33690/2-A
Matrix: Solid
Analysis Batch: 33886

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	261.9		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-33690/3-A
Matrix: Solid
Analysis Batch: 33886

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	261.6		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 890-2875-A-11-C MS
Matrix: Solid
Analysis Batch: 33886

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2300		1240	3640		mg/Kg		108	90 - 110		

Lab Sample ID: 890-2875-A-11-D MSD
Matrix: Solid
Analysis Batch: 33886

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2300		1240	3642		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

GC VOA

Prep Batch: 34107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Total/NA	Solid	5035	
890-2877-2	SS02	Total/NA	Solid	5035	
890-2877-3	SS03	Total/NA	Solid	5035	
890-2877-4	SS04	Total/NA	Solid	5035	
MB 880-34107/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Total/NA	Solid	8021B	34107
890-2877-2	SS02	Total/NA	Solid	8021B	34107
890-2877-3	SS03	Total/NA	Solid	8021B	34107
890-2877-4	SS04	Total/NA	Solid	8021B	34107
MB 880-34107/5-A	Method Blank	Total/NA	Solid	8021B	34107
LCS 880-34107/1-A	Lab Control Sample	Total/NA	Solid	8021B	34107
LCSD 880-34107/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34107
890-2865-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	34107
890-2865-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34107

Analysis Batch: 34239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Total/NA	Solid	Total BTEX	
890-2877-2	SS02	Total/NA	Solid	Total BTEX	
890-2877-3	SS03	Total/NA	Solid	Total BTEX	
890-2877-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Total/NA	Solid	8015NM Prep	
890-2877-2	SS02	Total/NA	Solid	8015NM Prep	
890-2877-3	SS03	Total/NA	Solid	8015NM Prep	
890-2877-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Total/NA	Solid	8015B NM	33565
890-2877-2	SS02	Total/NA	Solid	8015B NM	33565
890-2877-3	SS03	Total/NA	Solid	8015B NM	33565
890-2877-4	SS04	Total/NA	Solid	8015B NM	33565
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015B NM	33565
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33565

QC Association Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

GC Semi VOA (Continued)

Analysis Batch: 33582 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33565
890-2861-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33565
890-2861-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33565

Analysis Batch: 33836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Total/NA	Solid	8015 NM	
890-2877-2	SS02	Total/NA	Solid	8015 NM	
890-2877-3	SS03	Total/NA	Solid	8015 NM	
890-2877-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Soluble	Solid	DI Leach	
890-2877-2	SS02	Soluble	Solid	DI Leach	
890-2877-3	SS03	Soluble	Solid	DI Leach	
890-2877-4	SS04	Soluble	Solid	DI Leach	
MB 880-33690/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33690/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33690/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2875-A-11-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2875-A-11-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2877-1	SS01	Soluble	Solid	300.0	33690
890-2877-2	SS02	Soluble	Solid	300.0	33690
890-2877-3	SS03	Soluble	Solid	300.0	33690
890-2877-4	SS04	Soluble	Solid	300.0	33690
MB 880-33690/1-A	Method Blank	Soluble	Solid	300.0	33690
LCS 880-33690/2-A	Lab Control Sample	Soluble	Solid	300.0	33690
LCSD 880-33690/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33690
890-2875-A-11-C MS	Matrix Spike	Soluble	Solid	300.0	33690
890-2875-A-11-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33690

Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Client Sample ID: SS01

Date Collected: 09/01/22 11:15
Date Received: 09/01/22 13:49

Lab Sample ID: 890-2877-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	34153	09/11/22 01:39	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34239	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33836	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33565	09/02/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/03/22 03:07	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	33690	09/03/22 13:21	KS	EET MID
Soluble	Analysis	300.0		10			33886	09/07/22 19:02	CH	EET MID

Client Sample ID: SS02

Date Collected: 09/01/22 11:20
Date Received: 09/01/22 13:49

Lab Sample ID: 890-2877-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	34153	09/11/22 02:00	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34239	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33836	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	33565	09/02/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/03/22 03:50	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	33690	09/03/22 13:21	KS	EET MID
Soluble	Analysis	300.0		20			33886	09/08/22 11:41	CH	EET MID

Client Sample ID: SS03

Date Collected: 09/01/22 11:25
Date Received: 09/01/22 13:49

Lab Sample ID: 890-2877-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	34153	09/11/22 02:20	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34239	09/12/22 09:52	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33836	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33565	09/02/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/03/22 04:12	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	33690	09/03/22 13:21	KS	EET MID
Soluble	Analysis	300.0		20			33886	09/08/22 11:46	CH	EET MID

Client Sample ID: SS04

Date Collected: 09/01/22 11:30
Date Received: 09/01/22 13:49

Lab Sample ID: 890-2877-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34107	09/09/22 12:37	MR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	34153	09/11/22 02:40	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34239	09/12/22 09:52	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Client Sample ID: SS04

Date Collected: 09/01/22 11:30
Date Received: 09/01/22 13:49

Lab Sample ID: 890-2877-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			33836	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33565	09/02/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/03/22 03:29	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	33690	09/03/22 13:21	KS	EET MID
Soluble	Analysis	300.0		10			33886	09/07/22 19:27	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-2877-1
SDG: 03D2057023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2877-1	SS01	Solid	09/01/22 11:15	09/01/22 13:49	0.5
890-2877-2	SS02	Solid	09/01/22 11:20	09/01/22 13:49	0.5
890-2877-3	SS03	Solid	09/01/22 11:25	09/01/22 13:49	0.5
890-2877-4	SS04	Solid	09/01/22 11:30	09/01/22 13:49	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum	Company Name:	Ensolum
Address:	3122 National Parks HWY	Address:	3122 National Parks HWY
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503	Email:	kjennings@ensolum.com

Work Order Comments

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

Project Name:	MCA 2A Header Main Line	Turn Around	
Project Number:	03D2057023	☑ Routine ☐ Rush	
Project Location:		Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
CC #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6	
Total Containers:		Corrected Temperature:	2.4	

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	S	9.1.22	11:15	0.5'	Grab/	1		X	X	X
SS02	S	9.1.22	11:20	0.5'	Grab/	1		X	X	X
SS03	S	9.1.22	11:25	0.5'	Grab/	1		X	X	X
SS04	S	9.1.22	11:30	0.5'	Grab/	1		X	X	X

890-2877 Chain of Custody

Sample Comments

Incident Numbers

9.1.22

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9.1.22 1349	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2877-1
SDG Number: 03D2057023

Login Number: 2877
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2877-1
SDG Number: 03D2057023

Login Number: 2877
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/02/22 10:54 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-3102-1
Client Project/Site: MCA 2A Header Main Line

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
10/3/2022 11:02:57 AM

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

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

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

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Laboratory Job ID: 890-3102-1

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Definitions/Glossary

Client: Ensolum Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3102-1

Job ID: 890-3102-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3102-1

Receipt
The samples were received on 9/28/2022 4:21 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-35872 and analytical batch 880-35873 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS03 (890-3102-3). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-3075-A-1-B), (890-3075-A-1-C MS) and (890-3075-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-35805 and analytical batch 880-35863 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-35800 and analytical batch 880-35828 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Client Sample ID: FS01
Lab Sample ID: 890-3102-1
Date Collected: 09/28/22 08:30
Matrix: Solid
Date Received: 09/28/22 16:21
Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/01/22 09:43	10/01/22 13:52	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/01/22 09:43	10/01/22 13:52	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/01/22 09:43	10/01/22 13:52	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		10/01/22 09:43	10/01/22 13:52	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/01/22 09:43	10/01/22 13:52	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		10/01/22 09:43	10/01/22 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*10/01/22 09:43*	*10/01/22 13:52*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/01/22 09:43*	*10/01/22 13:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			10/02/22 08:55	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			10/03/22 11:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 15:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 15:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*09/30/22 11:17*	*10/01/22 15:49*	*1*
o-Terphenyl	*81*		*70 - 130*	*09/30/22 11:17*	*10/01/22 15:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5130**	**F1**	50.5		mg/Kg			09/30/22 16:33	10

Client Sample ID: FS02
Lab Sample ID: 890-3102-2
Date Collected: 09/28/22 08:35
Matrix: Solid
Date Received: 09/28/22 16:21
Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/01/22 09:43	10/01/22 14:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/01/22 09:43	10/01/22 14:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/01/22 09:43	10/01/22 14:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/01/22 09:43	10/01/22 14:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/01/22 09:43	10/01/22 14:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/01/22 09:43	10/01/22 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/01/22 09:43*	*10/01/22 14:12*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3102-1

Client Sample ID: FS02

Lab Sample ID: 890-3102-2
Matrix: Solid
Date Collected: 09/28/22 08:35
Date Received: 09/28/22 16:21
Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*10/01/22 09:43*	*10/01/22 14:12*	*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			10/02/22 08:55	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			10/03/22 11:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/30/22 11:17	10/01/22 16:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/30/22 11:17	10/01/22 16:11	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/30/22 11:17	10/01/22 16:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*112*		*70 - 130*	*09/30/22 11:17*	*10/01/22 16:11*	*1*
o-Terphenyl	*101*		*70 - 130*	*09/30/22 11:17*	*10/01/22 16:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5850**		50.2		mg/Kg			09/30/22 16:48	10

Client Sample ID: FS03

Lab Sample ID: 890-3102-3
Matrix: Solid
Date Collected: 09/28/22 08:40
Date Received: 09/28/22 16:21
Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/01/22 09:43	10/01/22 14:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:33	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/01/22 09:43	10/01/22 14:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*10/01/22 09:43*	*10/01/22 14:33*	*1*
1,4-Difluorobenzene (Surr)	*59*	*S1-*	*70 - 130*	*10/01/22 09:43*	*10/01/22 14:33*	*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			10/02/22 08:55	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			10/03/22 11:31	1

Client Sample Results

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Client Sample ID: FS03
Lab Sample ID: 890-3102-3
Date Collected: 09/28/22 08:40
Matrix: Solid
Date Received: 09/28/22 16:21
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 16:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 16:32	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*09/30/22 11:17*	*10/01/22 16:32*	*1*
o-Terphenyl	*85*		*70 - 130*	*09/30/22 11:17*	*10/01/22 16:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5470**		50.3		mg/Kg			09/30/22 16:52	10

Client Sample ID: FS04
Lab Sample ID: 890-3102-4
Date Collected: 09/28/22 08:45
Matrix: Solid
Date Received: 09/28/22 16:21
Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/01/22 09:43	10/01/22 14:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 14:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/01/22 09:43	10/01/22 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*10/01/22 09:43*	*10/01/22 14:54*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/01/22 09:43*	*10/01/22 14:54*	*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			10/02/22 08:55	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			10/03/22 11:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/30/22 11:17	10/01/22 16:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/30/22 11:17	10/01/22 16:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/30/22 11:17	10/01/22 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*09/30/22 11:17*	*10/01/22 16:54*	*1*
o-Terphenyl	*89*		*70 - 130*	*09/30/22 11:17*	*10/01/22 16:54*	*1*

Client Sample Results

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Client Sample ID: FS04
Lab Sample ID: 890-3102-4
Date Collected: 09/28/22 08:45
Matrix: Solid
Date Received: 09/28/22 16:21
Sample Depth: 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6700		49.9		mg/Kg			09/30/22 16:57	10

Client Sample ID: FS05
Lab Sample ID: 890-3102-5
Date Collected: 09/28/22 08:50
Matrix: Solid
Date Received: 09/28/22 16:21
Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 15:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 15:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 15:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/01/22 09:43	10/01/22 15:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/01/22 09:43	10/01/22 15:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/01/22 09:43	10/01/22 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/01/22 09:43*	*10/01/22 15:15*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/01/22 09:43*	*10/01/22 15:15*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			10/02/22 08:55	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			10/03/22 11:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 17:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 17:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/22 11:17	10/01/22 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*09/30/22 11:17*	*10/01/22 17:37*	*1*
o-Terphenyl	*87*		*70 - 130*	*09/30/22 11:17*	*10/01/22 17:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7390		49.7		mg/Kg			09/30/22 17:02	10

Surrogate Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3102-1

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-19424-A-1-J MS	Matrix Spike	94	90
880-19424-A-1-K MSD	Matrix Spike Duplicate	99	93
890-3102-1	FS01	108	93
890-3102-2	FS02	103	90
890-3102-3	FS03	79	59 S1-
890-3102-4	FS04	105	93
890-3102-5	FS05	103	96
LCS 880-35872/1-A	Lab Control Sample	83	91
LCS 880-35872/2-A	Lab Control Sample	86	89
MB 880-35872/5-A	Method Blank	81	73

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)
890-3075-A-1-C MS	Matrix Spike	69 S1-	62 S1-
890-3075-A-1-D MSD	Matrix Spike Duplicate	68 S1-	62 S1-
890-3102-1	FS01	89	81
890-3102-2	FS02	112	101
890-3102-3	FS03	94	85
890-3102-4	FS04	98	89
890-3102-5	FS05	96	87
LCS 880-35805/2-A	Lab Control Sample	95	91
LCSD 880-35805/3-A	Lab Control Sample Dup	109	103
MB 880-35805/1-A	Method Blank	109	99

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3102-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-35872/5-A
Matrix: Solid
Analysis Batch: 35873

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 35872

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/01/22 09:43	10/01/22 11:46	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/01/22 09:43	10/01/22 11:46	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/01/22 09:43	10/01/22 11:46	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/01/22 09:43	10/01/22 11:46	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/01/22 09:43	10/01/22 11:46	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/01/22 09:43	10/01/22 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*10/01/22 09:43*	*10/01/22 11:46*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*10/01/22 09:43*	*10/01/22 11:46*	*1*

Lab Sample ID: LCS 880-35872/1-A
Matrix: Solid
Analysis Batch: 35873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35872

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.0992	0.1075		mg/Kg		108	70 - 130		
Toluene			0.0992	0.08595		mg/Kg		87	70 - 130		
Ethylbenzene			0.0992	0.08026		mg/Kg		81	70 - 130		
m-Xylene & p-Xylene			0.198	0.1632		mg/Kg		82	70 - 130		
o-Xylene			0.0992	0.08000		mg/Kg		81	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: LCS 880-35872/2-A
Matrix: Solid
Analysis Batch: 35873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35872

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.0998	0.1130		mg/Kg		113	70 - 130		
Toluene			0.0998	0.09192		mg/Kg		92	70 - 130		
Ethylbenzene			0.0998	0.08592		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene			0.200	0.1718		mg/Kg		86	70 - 130		
o-Xylene			0.0998	0.08346		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-19424-A-1-J MS
Matrix: Solid
Analysis Batch: 35873

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35872

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1 F2	0.100	0.08798		mg/Kg		88	70 - 130		
Toluene	<0.00199	U F1 F2	0.100	0.08008		mg/Kg		80	70 - 130		

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QC Sample Results

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

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

Lab Sample ID: 880-19424-A-1-J MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35873 — **Prep Batch: 35872**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1 F2	0.100	0.07730		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	0.1596		mg/Kg		80	70 - 130
o-Xylene	<0.00199	U F1 F2	0.100	0.07839		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-19424-A-1-K MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35873 — **Prep Batch: 35872**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1 F2	0.100	0.02363	F1 F2	mg/Kg		24	70 - 130	115	35
Toluene	<0.00199	U F1 F2	0.100	0.02150	F1 F2	mg/Kg		21	70 - 130	115	35
Ethylbenzene	<0.00199	U F1 F2	0.100	0.01611	F1 F2	mg/Kg		16	70 - 130	131	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	0.01537	F1 F2	mg/Kg		8	70 - 130	165	35
o-Xylene	<0.00199	U F1 F2	0.100	0.01660	F1 F2	mg/Kg		17	70 - 130	130	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

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

Lab Sample ID: MB 880-35805/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35863 — **Prep Batch: 35805**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/30/22 11:17	10/01/22 11:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/30/22 11:17	10/01/22 11:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/30/22 11:17	10/01/22 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/30/22 11:17*	*10/01/22 11:52*	*1*
o-Terphenyl	*99*		*70 - 130*	*09/30/22 11:17*	*10/01/22 11:52*	*1*

Lab Sample ID: LCS 880-35805/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 35863 — **Prep Batch: 35805**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	812.7		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)	1000	888.2		mg/Kg		89	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3102-1

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

Lab Sample ID: LCS 880-35805/2-A
Matrix: Solid
Analysis Batch: 35863

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35805

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

Lab Sample ID: LCSD 880-35805/3-A
Matrix: Solid
Analysis Batch: 35863

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35805

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	956.4		mg/Kg		96	70 - 130	16	20
Diesel Range Organics (Over C10-C28)			1000	991.8		mg/Kg		99	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-3075-A-1-C MS
Matrix: Solid
Analysis Batch: 35863

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 35805

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	998	603.9	F1	mg/Kg		61	70 - 130		
Diesel Range Organics (Over C10-C28)	188	F1	998	466.6	F1	mg/Kg		28	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	69	S1-	70 - 130
o-Terphenyl	62	S1-	70 - 130

Lab Sample ID: 890-3075-A-1-D MSD
Matrix: Solid
Analysis Batch: 35863

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 35805

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	999	573.3	F1	mg/Kg		57	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	188	F1	999	464.2	F1	mg/Kg		28	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	68	S1-	70 - 130
o-Terphenyl	62	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3102-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-35800/1-A
Matrix: Solid
Analysis Batch: 35828

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/30/22 16:19	1

Lab Sample ID: LCS 880-35800/2-A
Matrix: Solid
Analysis Batch: 35828

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	246.0		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-35800/3-A
Matrix: Solid
Analysis Batch: 35828

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	247.0		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-3102-1 MS
Matrix: Solid
Analysis Batch: 35828

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5130	F1	2530	8888	F1	mg/Kg		149	90 - 110		

Lab Sample ID: 890-3102-1 MSD
Matrix: Solid
Analysis Batch: 35828

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5130	F1	2530	8915	F1	mg/Kg		150	90 - 110	0	20

QC Association Summary

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

GC VOA

Prep Batch: 35872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Total/NA	Solid	5035	
890-3102-2	FS02	Total/NA	Solid	5035	
890-3102-3	FS03	Total/NA	Solid	5035	
890-3102-4	FS04	Total/NA	Solid	5035	
890-3102-5	FS05	Total/NA	Solid	5035	
MB 880-35872/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35872/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 880-35872/2-A	Lab Control Sample	Total/NA	Solid	5035	
880-19424-A-1-J MS	Matrix Spike	Total/NA	Solid	5035	
880-19424-A-1-K MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 35873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Total/NA	Solid	8021B	35872
890-3102-2	FS02	Total/NA	Solid	8021B	35872
890-3102-3	FS03	Total/NA	Solid	8021B	35872
890-3102-4	FS04	Total/NA	Solid	8021B	35872
890-3102-5	FS05	Total/NA	Solid	8021B	35872
MB 880-35872/5-A	Method Blank	Total/NA	Solid	8021B	35872
LCS 880-35872/1-A	Lab Control Sample	Total/NA	Solid	8021B	35872
LCS 880-35872/2-A	Lab Control Sample	Total/NA	Solid	8021B	35872
880-19424-A-1-J MS	Matrix Spike	Total/NA	Solid	8021B	35872
880-19424-A-1-K MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	35872

Analysis Batch: 35886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Total/NA	Solid	Total BTEX	
890-3102-2	FS02	Total/NA	Solid	Total BTEX	
890-3102-3	FS03	Total/NA	Solid	Total BTEX	
890-3102-4	FS04	Total/NA	Solid	Total BTEX	
890-3102-5	FS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 35805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Total/NA	Solid	8015NM Prep	
890-3102-2	FS02	Total/NA	Solid	8015NM Prep	
890-3102-3	FS03	Total/NA	Solid	8015NM Prep	
890-3102-4	FS04	Total/NA	Solid	8015NM Prep	
890-3102-5	FS05	Total/NA	Solid	8015NM Prep	
MB 880-35805/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35805/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35805/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3075-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3075-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 35863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Total/NA	Solid	8015B NM	35805
890-3102-2	FS02	Total/NA	Solid	8015B NM	35805

QC Association Summary

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

GC Semi VOA (Continued)

Analysis Batch: 35863 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-3	FS03	Total/NA	Solid	8015B NM	35805
890-3102-4	FS04	Total/NA	Solid	8015B NM	35805
890-3102-5	FS05	Total/NA	Solid	8015B NM	35805
MB 880-35805/1-A	Method Blank	Total/NA	Solid	8015B NM	35805
LCS 880-35805/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35805
LCSD 880-35805/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35805
890-3075-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	35805
890-3075-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	35805

Analysis Batch: 35971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Total/NA	Solid	8015 NM	
890-3102-2	FS02	Total/NA	Solid	8015 NM	
890-3102-3	FS03	Total/NA	Solid	8015 NM	
890-3102-4	FS04	Total/NA	Solid	8015 NM	
890-3102-5	FS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 35800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Soluble	Solid	DI Leach	
890-3102-2	FS02	Soluble	Solid	DI Leach	
890-3102-3	FS03	Soluble	Solid	DI Leach	
890-3102-4	FS04	Soluble	Solid	DI Leach	
890-3102-5	FS05	Soluble	Solid	DI Leach	
MB 880-35800/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-35800/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-35800/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3102-1 MS	FS01	Soluble	Solid	DI Leach	
890-3102-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 35828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3102-1	FS01	Soluble	Solid	300.0	35800
890-3102-2	FS02	Soluble	Solid	300.0	35800
890-3102-3	FS03	Soluble	Solid	300.0	35800
890-3102-4	FS04	Soluble	Solid	300.0	35800
890-3102-5	FS05	Soluble	Solid	300.0	35800
MB 880-35800/1-A	Method Blank	Soluble	Solid	300.0	35800
LCS 880-35800/2-A	Lab Control Sample	Soluble	Solid	300.0	35800
LCSD 880-35800/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	35800
890-3102-1 MS	FS01	Soluble	Solid	300.0	35800
890-3102-1 MSD	FS01	Soluble	Solid	300.0	35800

Lab Chronicle

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Client Sample ID: FS01
Lab Sample ID: 890-3102-1
Date Collected: 09/28/22 08:30
Matrix: Solid
Date Received: 09/28/22 16:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	35872	10/01/22 09:43	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35873	10/01/22 13:52	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35886	10/02/22 08:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35971	10/03/22 11:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35805	09/30/22 11:17	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35863	10/01/22 15:49	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	35800	09/30/22 10:40	SMC	EET MID
Soluble	Analysis	300.0		10			35828	09/30/22 16:33	CH	EET MID

Client Sample ID: FS02
Lab Sample ID: 890-3102-2
Date Collected: 09/28/22 08:35
Matrix: Solid
Date Received: 09/28/22 16:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	35872	10/01/22 09:43	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35873	10/01/22 14:12	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35886	10/02/22 08:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35971	10/03/22 11:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35805	09/30/22 11:17	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35863	10/01/22 16:11	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35800	09/30/22 10:40	SMC	EET MID
Soluble	Analysis	300.0		10			35828	09/30/22 16:48	CH	EET MID

Client Sample ID: FS03
Lab Sample ID: 890-3102-3
Date Collected: 09/28/22 08:40
Matrix: Solid
Date Received: 09/28/22 16:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35872	10/01/22 09:43	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35873	10/01/22 14:33	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35886	10/02/22 08:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35971	10/03/22 11:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	35805	09/30/22 11:17	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35863	10/01/22 16:32	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	35800	09/30/22 10:40	SMC	EET MID
Soluble	Analysis	300.0		10			35828	09/30/22 16:52	CH	EET MID

Client Sample ID: FS04
Lab Sample ID: 890-3102-4
Date Collected: 09/28/22 08:45
Matrix: Solid
Date Received: 09/28/22 16:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	35872	10/01/22 09:43	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35873	10/01/22 14:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35886	10/02/22 08:55	AJ	EET MID

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Lab Chronicle

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Client Sample ID: FS04
Lab Sample ID: 890-3102-4
Date Collected: 09/28/22 08:45
Matrix: Solid
Date Received: 09/28/22 16:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			35971	10/03/22 11:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	35805	09/30/22 11:17	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35863	10/01/22 16:54	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	35800	09/30/22 10:40	SMC	EET MID
Soluble	Analysis	300.0		10			35828	09/30/22 16:57	CH	EET MID

Client Sample ID: FS05
Lab Sample ID: 890-3102-5
Date Collected: 09/28/22 08:50
Matrix: Solid
Date Received: 09/28/22 16:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	35872	10/01/22 09:43	AJ	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35873	10/01/22 15:15	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			35886	10/02/22 08:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			35971	10/03/22 11:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35805	09/30/22 11:17	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35863	10/01/22 17:37	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	35800	09/30/22 10:40	SMC	EET MID
Soluble	Analysis	300.0		10			35828	09/30/22 17:02	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Job ID: 890-3102-1
Project/Site: MCA 2A Header Main Line

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3102-1	FS01	Solid	09/28/22 08:30	09/28/22 16:21	4'
890-3102-2	FS02	Solid	09/28/22 08:35	09/28/22 16:21	4'
890-3102-3	FS03	Solid	09/28/22 08:40	09/28/22 16:21	4'
890-3102-4	FS04	Solid	09/28/22 08:45	09/28/22 16:21	4'
890-3102-5	FS05	Solid	09/28/22 08:50	09/28/22 16:21	4'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	MCA 2A Header Main Line	Turn Around	
Project Number:	03D2057023	☐ Routine ☒ Rush	
Project Location:		Due Date:	3 Day
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TAM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.2	
Total Containers:		Corrected Temperature:	3.0	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01	S	09.28.22	830	4'	C	1	X	X	X
FS02	S	09.28.22	835	4'	C	1	X	X	X
FS03	S	09.28.22	840	4'	C	1	X	X	X
FS04	S	09.28.22	845	4'	C	1	X	X	X
FS05	S	09.28.22	850	4'	C	1	X	X	X

ANALYSIS REQUEST — Parameters

890-3102 Chain of Custody

Preservative Codes

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

Sample Comments

Incident Number

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9/28/22 1621			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3102-1
SDG Number:

Login Number: 3102
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3102-1
SDG Number:

Login Number: 3102
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/30/22 10:28 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
705 W. Wadley
Suite 210
Midland Texas 79701

Generated 11/23/2022 12:56:52 PM Revision 1

JOB DESCRIPTION

MCA 2A Header Main Line
SDG NUMBER 03D2057023

JOB NUMBER

890-3141-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Laboratory Job ID: 890-3141-1
SDG: 03D2057023

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Job ID: 890-3141-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3141-1

REVISION

The report being provided is a revision of the original report sent on 10/13/2022. The report (revision 1) is being revised due to Per client email, requesting sample ID edits.

Report revision history

Receipt
The samples were received on 10/5/2022 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS06 (890-3141-1), FS07 (890-3141-2), FS08 (890-3141-3), FS09 (890-3141-4), FS10 (890-3141-5), FS11 (890-3141-6), FS12 (890-3141-7), FS13 (890-3141-8), FS14 (890-3141-9), FS15 (890-3141-10), FS16 (890-3141-11), SW01 (890-3141-12), SW02 (890-3141-13), SW03 (890-3141-14), SW04 (890-3141-15), SW05 (890-3141-16), SW06 (890-3141-17) and SW07 (890-3141-18).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-36588 and analytical batch 880-36674 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-36678 and analytical batch 880-36674 was outside the upper control limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-36588 and analytical batch 880-36674 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-36291 and analytical batch 880-36220 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-36241 and analytical batch 880-36597 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS06

Date Collected: 10/04/22 12:00
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U F2 F1	0.00202		mg/Kg		10/10/22 13:26	10/12/22 05:55	1
Toluene	<0.00202	U F2 F1	0.00202		mg/Kg		10/10/22 13:26	10/12/22 05:55	1
Ethylbenzene	<0.00202	U F2 F1	0.00202		mg/Kg		10/10/22 13:26	10/12/22 05:55	1
m-Xylene & p-Xylene	<0.00403	U F2 F1	0.00403		mg/Kg		10/10/22 13:26	10/12/22 05:55	1
o-Xylene	<0.00202	U F2 F1	0.00202		mg/Kg		10/10/22 13:26	10/12/22 05:55	1
Xylenes, Total	<0.00403	U F2 F1	0.00403		mg/Kg		10/10/22 13:26	10/12/22 05:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*10/10/22 13:26*	*10/12/22 05:55*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/10/22 13:26*	*10/12/22 05:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 21:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 21:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 21:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*10/06/22 15:48*	*10/06/22 21:19*	*1*
o-Terphenyl	*96*		*70 - 130*	*10/06/22 15:48*	*10/06/22 21:19*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2300**	**F1**	25.3		mg/Kg			10/10/22 22:49	5

Client Sample ID: FS07

Date Collected: 10/04/22 12:05
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 06:21	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 06:21	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 06:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/22 13:26	10/12/22 06:21	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 06:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/22 13:26	10/12/22 06:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*10/10/22 13:26*	*10/12/22 06:21*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS07

Date Collected: 10/04/22 12:05
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*10/10/22 13:26*	*10/12/22 06:21*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/06/22 15:48	10/06/22 22:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/06/22 15:48	10/06/22 22:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/06/22 15:48	10/06/22 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*10/06/22 15:48*	*10/06/22 22:24*	*1*
o-Terphenyl	*88*		*70 - 130*	*10/06/22 15:48*	*10/06/22 22:24*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5210**		50.0	mg/Kg			10/10/22 23:12	10

Client Sample ID: FS08

Date Collected: 10/04/22 12:10
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		10/10/22 13:26	10/12/22 06:47	1
Toluene	<0.00198	U	0.00198	mg/Kg		10/10/22 13:26	10/12/22 06:47	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		10/10/22 13:26	10/12/22 06:47	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		10/10/22 13:26	10/12/22 06:47	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		10/10/22 13:26	10/12/22 06:47	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		10/10/22 13:26	10/12/22 06:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*10/10/22 13:26*	*10/12/22 06:47*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/10/22 13:26*	*10/12/22 06:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/07/22 10:01	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS08

Date Collected: 10/04/22 12:10
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 22:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 22:46	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 22:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*10/06/22 15:48*	*10/06/22 22:46*	*1*
o-Terphenyl	*84*		*70 - 130*	*10/06/22 15:48*	*10/06/22 22:46*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4240**		24.9		mg/Kg			10/10/22 23:20	5

Client Sample ID: FS09

Date Collected: 10/04/22 12:15
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 07:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 07:13	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 07:13	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/10/22 13:26	10/12/22 07:13	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 07:13	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/10/22 13:26	10/12/22 07:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*10/10/22 13:26*	*10/12/22 07:13*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/10/22 13:26*	*10/12/22 07:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*10/06/22 15:48*	*10/06/22 23:07*	*1*
o-Terphenyl	*82*		*70 - 130*	*10/06/22 15:48*	*10/06/22 23:07*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS09

Date Collected: 10/04/22 12:15
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-4
Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4620**		24.8		mg/Kg			10/10/22 23:28	5

Client Sample ID: FS10

Date Collected: 10/04/22 12:20
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 07:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 07:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 07:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/22 13:26	10/12/22 07:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 07:40	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/22 13:26	10/12/22 07:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*10/10/22 13:26*	*10/12/22 07:40*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*10/10/22 13:26*	*10/12/22 07:40*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**201**		49.9		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:29	1
Diesel Range Organics (Over C10-C28)	**201**		49.9		mg/Kg		10/06/22 15:48	10/06/22 23:29	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*10/06/22 15:48*	*10/06/22 23:29*	*1*
o-Terphenyl	*91*		*70 - 130*	*10/06/22 15:48*	*10/06/22 23:29*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5130**		50.2		mg/Kg			10/10/22 23:35	10

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS11

Date Collected: 10/04/22 12:25
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 08:06	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 08:06	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 08:06	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		10/10/22 13:26	10/12/22 08:06	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 08:06	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		10/10/22 13:26	10/12/22 08:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*10/10/22 13:26*	*10/12/22 08:06*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*10/10/22 13:26*	*10/12/22 08:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/06/22 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*10/06/22 15:48*	*10/06/22 23:50*	*1*
o-Terphenyl	*80*		*70 - 130*	*10/06/22 15:48*	*10/06/22 23:50*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2530**		25.0		mg/Kg			10/10/22 23:59	5

Client Sample ID: FS12

Date Collected: 10/04/22 12:30
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 08:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 08:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 08:41	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/10/22 13:26	10/12/22 08:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 08:41	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/10/22 13:26	10/12/22 08:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*10/10/22 13:26*	*10/12/22 08:41*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS12

Date Collected: 10/04/22 12:30
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/10/22 13:26*	*10/12/22 08:41*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/06/22 15:48	10/07/22 00:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/06/22 15:48	10/07/22 00:11	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/06/22 15:48	10/07/22 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*10/06/22 15:48*	*10/07/22 00:11*	*1*
o-Terphenyl	*95*		*70 - 130*	*10/06/22 15:48*	*10/07/22 00:11*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4150**		24.8	mg/Kg			10/11/22 00:06	5

Client Sample ID: FS13

Date Collected: 10/04/22 12:35
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/10/22 13:26	10/12/22 12:10	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/10/22 13:26	10/12/22 12:10	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/10/22 13:26	10/12/22 12:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/10/22 13:26	10/12/22 12:10	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/10/22 13:26	10/12/22 12:10	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/10/22 13:26	10/12/22 12:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/10/22 13:26*	*10/12/22 12:10*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*10/10/22 13:26*	*10/12/22 12:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.3**		49.9	mg/Kg			10/07/22 10:01	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS13

Date Collected: 10/04/22 12:35
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/07/22 00:33	1
Diesel Range Organics (Over C10-C28)	**57.3**		49.9		mg/Kg		10/06/22 15:48	10/07/22 00:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/22 15:48	10/07/22 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*10/06/22 15:48*	*10/07/22 00:33*	*1*
o-Terphenyl	*93*		*70 - 130*	*10/06/22 15:48*	*10/07/22 00:33*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3600**		25.0		mg/Kg			10/11/22 00:14	5

Client Sample ID: FS14

Date Collected: 10/04/22 12:40
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 12:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 12:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 12:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/10/22 13:26	10/12/22 12:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 12:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/10/22 13:26	10/12/22 12:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*10/10/22 13:26*	*10/12/22 12:36*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*10/10/22 13:26*	*10/12/22 12:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 00:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 00:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*10/06/22 15:48*	*10/07/22 00:54*	*1*
o-Terphenyl	*91*		*70 - 130*	*10/06/22 15:48*	*10/07/22 00:54*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS14

Lab Sample ID: 890-3141-9
Matrix: Solid
Date Collected: 10/04/22 12:40
Date Received: 10/05/22 09:10
Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3500**		24.8		mg/Kg			10/11/22 00:22	5

Client Sample ID: FS15

Lab Sample ID: 890-3141-10
Matrix: Solid
Date Collected: 10/04/22 12:45
Date Received: 10/05/22 09:10
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 13:02	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 13:02	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 13:02	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		10/10/22 13:26	10/12/22 13:02	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/10/22 13:26	10/12/22 13:02	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		10/10/22 13:26	10/12/22 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*10/10/22 13:26*	*10/12/22 13:02*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/10/22 13:26*	*10/12/22 13:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**91.9**		50.0		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 01:15	1
Diesel Range Organics (Over C10-C28)	**91.9**		50.0		mg/Kg		10/06/22 15:48	10/07/22 01:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 01:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*10/06/22 15:48*	*10/07/22 01:15*	*1*
o-Terphenyl	*81*		*70 - 130*	*10/06/22 15:48*	*10/07/22 01:15*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3190**		25.2		mg/Kg			10/11/22 00:29	5

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS16

Date Collected: 10/04/22 12:50
Date Received: 10/05/22 09:10
Sample Depth: 4'

Lab Sample ID: 890-3141-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 13:28	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 13:28	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 13:28	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/10/22 13:26	10/12/22 13:28	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 13:28	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/10/22 13:26	10/12/22 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*10/10/22 13:26*	*10/12/22 13:28*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/10/22 13:26*	*10/12/22 13:28*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**58.8**		49.8		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 01:59	1
Diesel Range Organics (Over C10-C28)	**58.8**		49.8		mg/Kg		10/06/22 15:48	10/07/22 01:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*10/06/22 15:48*	*10/07/22 01:59*	*1*
o-Terphenyl	*79*		*70 - 130*	*10/06/22 15:48*	*10/07/22 01:59*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3180**	**F1**	24.9		mg/Kg			10/11/22 00:37	5

Client Sample ID: SW01

Date Collected: 10/04/22 12:55
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-12
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 13:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 13:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 13:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/10/22 13:26	10/12/22 13:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 13:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/10/22 13:26	10/12/22 13:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*10/10/22 13:26*	*10/12/22 13:54*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW01

Date Collected: 10/04/22 12:55
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-12
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/10/22 13:26*	*10/12/22 13:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/06/22 15:48	10/07/22 02:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/06/22 15:48	10/07/22 02:20	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/06/22 15:48	10/07/22 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*70*		*70 - 130*	*10/06/22 15:48*	*10/07/22 02:20*	*1*
o-Terphenyl	*74*		*70 - 130*	*10/06/22 15:48*	*10/07/22 02:20*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.9**		4.98	mg/Kg			10/11/22 01:00	1

Client Sample ID: SW02

Date Collected: 10/04/22 13:00
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		10/10/22 13:26	10/12/22 14:20	1
Toluene	<0.00202	U	0.00202	mg/Kg		10/10/22 13:26	10/12/22 14:20	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		10/10/22 13:26	10/12/22 14:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		10/10/22 13:26	10/12/22 14:20	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		10/10/22 13:26	10/12/22 14:20	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		10/10/22 13:26	10/12/22 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*10/10/22 13:26*	*10/12/22 14:20*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*10/10/22 13:26*	*10/12/22 14:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/07/22 10:01	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW02

Date Collected: 10/04/22 13:00
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 02:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 02:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*10/06/22 15:48*	*10/07/22 02:42*	*1*
o-Terphenyl	*86*		*70 - 130*	*10/06/22 15:48*	*10/07/22 02:42*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.7**		4.95		mg/Kg			10/11/22 01:08	1

Client Sample ID: SW03

Date Collected: 10/04/22 13:05
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-14
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 14:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 14:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 14:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/22 13:26	10/12/22 14:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/22 13:26	10/12/22 14:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/22 13:26	10/12/22 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*10/10/22 13:26*	*10/12/22 14:46*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/10/22 13:26*	*10/12/22 14:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 03:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 03:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*10/06/22 15:48*	*10/07/22 03:03*	*1*
o-Terphenyl	*86*		*70 - 130*	*10/06/22 15:48*	*10/07/22 03:03*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW03

Date Collected: 10/04/22 13:05
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-14
Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.7		5.00		mg/Kg			10/11/22 01:31	1

Client Sample ID: SW04

Date Collected: 10/04/22 13:10
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-15
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 15:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 15:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 15:12	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/22 13:26	10/12/22 15:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 15:12	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/22 13:26	10/12/22 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*10/10/22 13:26*	*10/12/22 15:12*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*10/10/22 13:26*	*10/12/22 15:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 03:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 03:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/07/22 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*10/06/22 15:48*	*10/07/22 03:25*	*1*
o-Terphenyl	*75*		*70 - 130*	*10/06/22 15:48*	*10/07/22 03:25*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.1		4.97		mg/Kg			10/11/22 01:39	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW05

Date Collected: 10/04/22 13:15
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-16
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 15:38	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 15:38	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 15:38	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/10/22 13:26	10/12/22 15:38	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/10/22 13:26	10/12/22 15:38	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/10/22 13:26	10/12/22 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*10/10/22 13:26*	*10/12/22 15:38*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/10/22 13:26*	*10/12/22 15:38*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 03:47	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 03:47	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 03:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*10/06/22 15:48*	*10/07/22 03:47*	*1*
o-Terphenyl	*87*		*70 - 130*	*10/06/22 15:48*	*10/07/22 03:47*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.8**		4.98		mg/Kg			10/11/22 01:47	1

Client Sample ID: SW06

Date Collected: 10/04/22 13:20
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-17
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 16:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 16:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 16:04	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/22 13:26	10/12/22 16:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 16:04	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/22 13:26	10/12/22 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/10/22 13:26*	*10/12/22 16:04*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW06

Date Collected: 10/04/22 13:20
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-17
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*10/10/22 13:26*	*10/12/22 16:04*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			10/07/22 10:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		10/06/22 15:48	10/07/22 04:09	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		10/06/22 15:48	10/07/22 04:09	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		10/06/22 15:48	10/07/22 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*10/06/22 15:48*	*10/07/22 04:09*	*1*
o-Terphenyl	*89*		*70 - 130*	*10/06/22 15:48*	*10/07/22 04:09*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.4**		5.00	mg/Kg			10/11/22 01:54	1

Client Sample ID: SW07

Date Collected: 10/04/22 13:25
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-18
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/11/22 16:29	10/12/22 17:26	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/11/22 16:29	10/12/22 17:26	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/11/22 16:29	10/12/22 17:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/11/22 16:29	10/12/22 17:26	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/11/22 16:29	10/12/22 17:26	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/11/22 16:29	10/12/22 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*10/11/22 16:29*	*10/12/22 17:26*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/11/22 16:29*	*10/12/22 17:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/12/22 11:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			10/07/22 10:01	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW07

Date Collected: 10/04/22 13:25
Date Received: 10/05/22 09:10
Sample Depth: 0-4'

Lab Sample ID: 890-3141-18

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 04:30	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 04:30	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/06/22 15:48	10/07/22 04:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*10/06/22 15:48*	*10/07/22 04:30*	*1*
o-Terphenyl	*86*		*70 - 130*	*10/06/22 15:48*	*10/07/22 04:30*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.7**		4.99		mg/Kg			10/11/22 02:02	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-20232-A-1-A MS	Matrix Spike	99	107
880-20232-A-1-B MSD	Matrix Spike Duplicate	77	109
890-3141-1	FS06	92	93
890-3141-1 MS	FS06	105	90
890-3141-1 MSD	FS06	112	98
890-3141-2	FS07	89	87
890-3141-3	FS08	114	99
890-3141-4	FS09	115	98
890-3141-5	FS10	89	91
890-3141-6	FS11	114	94
890-3141-7	FS12	108	93
890-3141-8	FS13	103	90
890-3141-9	FS14	99	90
890-3141-10	FS15	117	104
890-3141-11	FS16	114	93
890-3141-12	SW01	109	88
890-3141-13	SW02	117	90
890-3141-14	SW03	112	88
890-3141-15	SW04	122	100
890-3141-16	SW05	113	88
890-3141-17	SW06	116	86
890-3141-18	SW07	97	104
LCS 880-36588/1-A	Lab Control Sample	106	87
LCS 880-36699/1-A	Lab Control Sample	100	97
LCSD 880-36588/2-A	Lab Control Sample Dup	109	113
LCSD 880-36699/2-A	Lab Control Sample Dup	103	104
MB 880-36588/5-A	Method Blank	69 S1-	88
MB 880-36678/5-A	Method Blank	69 S1-	91
MB 880-36699/5-A	Method Blank	90	112

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3141-1	FS06	93	96
890-3141-1 MS	FS06	95	84
890-3141-1 MSD	FS06	85	81
890-3141-2	FS07	82	88
890-3141-3	FS08	80	84
890-3141-4	FS09	79	82
890-3141-5	FS10	89	91
890-3141-6	FS11	77	80
890-3141-7	FS12	95	95
890-3141-8	FS13	94	93

Surrogate Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
890-3141-9	FS14	92	91								
890-3141-10	FS15	79	81								
890-3141-11	FS16	78	79								
890-3141-12	SW01	70	74								
890-3141-13	SW02	88	86								
890-3141-14	SW03	88	86								
890-3141-15	SW04	72	75								
890-3141-16	SW05	87	87								
890-3141-17	SW06	91	89								
890-3141-18	SW07	89	86								
LCS 880-36291/2-A	Lab Control Sample	95	91								
LCSD 880-36291/3-A	Lab Control Sample Dup	116	104								
MB 880-36291/1-A	Method Blank	6 S1-	8 S1-								

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36588/5-A
Matrix: Solid
Analysis Batch: 36674

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36588

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 05:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 05:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 05:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/10/22 13:26	10/12/22 05:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/22 13:26	10/12/22 05:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/10/22 13:26	10/12/22 05:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*10/10/22 13:26*	*10/12/22 05:28*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/10/22 13:26*	*10/12/22 05:28*	*1*

Lab Sample ID: LCS 880-36588/1-A
Matrix: Solid
Analysis Batch: 36674

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36588

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09460		mg/Kg		95	70 - 130		
Toluene			0.100	0.09693		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.09514		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1961		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.08923		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: LCSD 880-36588/2-A
Matrix: Solid
Analysis Batch: 36674

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36588

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09830		mg/Kg		98	70 - 130	4	35
Toluene			0.100	0.09845		mg/Kg		98	70 - 130	2	35
Ethylbenzene			0.100	0.09518		mg/Kg		95	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.1958		mg/Kg		98	70 - 130	0	35
o-Xylene			0.100	0.08923		mg/Kg		89	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 890-3141-1 MS
Matrix: Solid
Analysis Batch: 36674

Client Sample ID: FS06
Prep Type: Total/NA
Prep Batch: 36588

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F2 F1	0.101	0.04576	F1	mg/Kg		45	70 - 130		
Toluene	<0.00202	U F2 F1	0.101	0.04217	F1	mg/Kg		42	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

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

Lab Sample ID: 890-3141-1 MS
Matrix: Solid
Analysis Batch: 36674

Client Sample ID: FS06
Prep Type: Total/NA
Prep Batch: 36588

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U F2 F1	0.101	0.04668	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00403	U F2 F1	0.202	0.1106	F1	mg/Kg		55	70 - 130
o-Xylene	<0.00202	U F2 F1	0.101	0.05811	F1	mg/Kg		58	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 890-3141-1 MSD
Matrix: Solid
Analysis Batch: 36674

Client Sample ID: FS06
Prep Type: Total/NA
Prep Batch: 36588

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F2 F1	0.0994	0.09978	F2	mg/Kg		100	70 - 130	74	35
Toluene	<0.00202	U F2 F1	0.0994	0.1025	F2	mg/Kg		103	70 - 130	83	35
Ethylbenzene	<0.00202	U F2 F1	0.0994	0.09678	F2	mg/Kg		97	70 - 130	70	35
m-Xylene & p-Xylene	<0.00403	U F2 F1	0.199	0.2019	F2	mg/Kg		102	70 - 130	58	35
o-Xylene	<0.00202	U F2 F1	0.0994	0.09202	F2	mg/Kg		93	70 - 130	45	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-36678/5-A
Matrix: Solid
Analysis Batch: 36674

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36678

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/11/22 13:04	10/11/22 15:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/11/22 13:04	10/11/22 15:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/11/22 13:04	10/11/22 15:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/11/22 13:04	10/11/22 15:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/11/22 13:04	10/11/22 15:54	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/11/22 13:04	10/11/22 15:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*10/11/22 13:04*	*10/11/22 15:54*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*10/11/22 13:04*	*10/11/22 15:54*	*1*

Lab Sample ID: MB 880-36699/5-A
Matrix: Solid
Analysis Batch: 36717

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36699

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/11/22 16:29	10/12/22 11:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/11/22 16:29	10/12/22 11:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/11/22 16:29	10/12/22 11:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/11/22 16:29	10/12/22 11:29	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

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

Lab Sample ID: MB 880-36699/5-A
Matrix: Solid
Analysis Batch: 36717

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36699

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/11/22 16:29	10/12/22 11:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/11/22 16:29	10/12/22 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*10/11/22 16:29*	*10/12/22 11:29*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*10/11/22 16:29*	*10/12/22 11:29*	*1*

Lab Sample ID: LCS 880-36699/1-A
Matrix: Solid
Analysis Batch: 36717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36699

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08151		mg/Kg		82	70 - 130		
Toluene			0.100	0.08917		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.07884		mg/Kg		79	70 - 130		
m-Xylene & p-Xylene			0.200	0.1575		mg/Kg		79	70 - 130		
o-Xylene			0.100	0.07833		mg/Kg		78	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-36699/2-A
Matrix: Solid
Analysis Batch: 36717

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36699

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09035		mg/Kg		90	70 - 130	10	35
Toluene			0.100	0.09725		mg/Kg		97	70 - 130	9	35
Ethylbenzene			0.100	0.08683		mg/Kg		87	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.1722		mg/Kg		86	70 - 130	9	35
o-Xylene			0.100	0.08568		mg/Kg		86	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-20232-A-1-A MS
Matrix: Solid
Analysis Batch: 36717

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 36699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09214		mg/Kg		92	70 - 130		
Toluene	<0.00201	U F1	0.100	0.09307		mg/Kg		93	70 - 130		
Ethylbenzene	<0.00201	U F1 F2	0.100	0.07772		mg/Kg		77	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.201	0.1563		mg/Kg		78	70 - 130		
o-Xylene	<0.00201	U F1 F2	0.100	0.07596		mg/Kg		75	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

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

Lab Sample ID: 880-20232-A-1-A MS
Matrix: Solid
Analysis Batch: 36717

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 36699

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

Lab Sample ID: 880-20232-A-1-B MSD
Matrix: Solid
Analysis Batch: 36717

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 36699

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0998	0.07929		mg/Kg		79	70 - 130	15	35
Toluene	<0.00201	U F1	0.0998	0.06564	F1	mg/Kg		66	70 - 130	35	35
Ethylbenzene	<0.00201	U F1 F2	0.0998	0.05281	F1 F2	mg/Kg		53	70 - 130	38	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.09464	F1 F2	mg/Kg		47	70 - 130	49	35
o-Xylene	<0.00201	U F1 F2	0.0998	0.04674	F1 F2	mg/Kg		46	70 - 130	48	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	77		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

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

Lab Sample ID: MB 880-36291/1-A
Matrix: Solid
Analysis Batch: 36220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36291

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 19:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 19:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/22 15:48	10/06/22 19:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	6	S1-	70 - 130	10/06/22 15:48	10/06/22 19:28	1
o-Terphenyl	8	S1-	70 - 130	10/06/22 15:48	10/06/22 19:28	1

Lab Sample ID: LCS 880-36291/2-A
Matrix: Solid
Analysis Batch: 36220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36291

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	835.0		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1005		mg/Kg		101	70 - 130		

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

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

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

Lab Sample ID: LCSD 880-36291/3-A
Matrix: Solid
Analysis Batch: 36220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36291

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	913.9		mg/Kg		91	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	1162		mg/Kg		116	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 890-3141-1 MS
Matrix: Solid
Analysis Batch: 36220

Client Sample ID: FS06
Prep Type: Total/NA
Prep Batch: 36291

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	805.4		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	972.6		mg/Kg		96	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 890-3141-1 MSD
Matrix: Solid
Analysis Batch: 36220

Client Sample ID: FS06
Prep Type: Total/NA
Prep Batch: 36291

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	800.0		mg/Kg		80	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	955.6		mg/Kg		94	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36241/1-A
Matrix: Solid
Analysis Batch: 36597

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/10/22 22:26	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-36241/2-A
Matrix: Solid
Analysis Batch: 36597

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	257.6		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-36241/3-A
Matrix: Solid
Analysis Batch: 36597

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	256.4		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-3141-1 MS
Matrix: Solid
Analysis Batch: 36597

Client Sample ID: FS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2300	F1	1260	3790	F1	mg/Kg		118	90 - 110		

Lab Sample ID: 890-3141-1 MSD
Matrix: Solid
Analysis Batch: 36597

Client Sample ID: FS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2300	F1	1260	3686		mg/Kg		110	90 - 110	3	20

Lab Sample ID: 890-3141-11 MS
Matrix: Solid
Analysis Batch: 36597

Client Sample ID: FS16
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	3180	F1	1250	4582	F1	mg/Kg		112	90 - 110		

Lab Sample ID: 890-3141-11 MSD
Matrix: Solid
Analysis Batch: 36597

Client Sample ID: FS16
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3180	F1	1250	4577	F1	mg/Kg		112	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

GC VOA

Prep Batch: 36588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Total/NA	Solid	5035	
890-3141-2	FS07	Total/NA	Solid	5035	
890-3141-3	FS08	Total/NA	Solid	5035	
890-3141-4	FS09	Total/NA	Solid	5035	
890-3141-5	FS10	Total/NA	Solid	5035	
890-3141-6	FS11	Total/NA	Solid	5035	
890-3141-7	FS12	Total/NA	Solid	5035	
890-3141-8	FS13	Total/NA	Solid	5035	
890-3141-9	FS14	Total/NA	Solid	5035	
890-3141-10	FS15	Total/NA	Solid	5035	
890-3141-11	FS16	Total/NA	Solid	5035	
890-3141-12	SW01	Total/NA	Solid	5035	
890-3141-13	SW02	Total/NA	Solid	5035	
890-3141-14	SW03	Total/NA	Solid	5035	
890-3141-15	SW04	Total/NA	Solid	5035	
890-3141-16	SW05	Total/NA	Solid	5035	
890-3141-17	SW06	Total/NA	Solid	5035	
MB 880-36588/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36588/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36588/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3141-1 MS	FS06	Total/NA	Solid	5035	
890-3141-1 MSD	FS06	Total/NA	Solid	5035	

Analysis Batch: 36674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Total/NA	Solid	8021B	36588
890-3141-2	FS07	Total/NA	Solid	8021B	36588
890-3141-3	FS08	Total/NA	Solid	8021B	36588
890-3141-4	FS09	Total/NA	Solid	8021B	36588
890-3141-5	FS10	Total/NA	Solid	8021B	36588
890-3141-6	FS11	Total/NA	Solid	8021B	36588
890-3141-7	FS12	Total/NA	Solid	8021B	36588
890-3141-8	FS13	Total/NA	Solid	8021B	36588
890-3141-9	FS14	Total/NA	Solid	8021B	36588
890-3141-10	FS15	Total/NA	Solid	8021B	36588
890-3141-11	FS16	Total/NA	Solid	8021B	36588
890-3141-12	SW01	Total/NA	Solid	8021B	36588
890-3141-13	SW02	Total/NA	Solid	8021B	36588
890-3141-14	SW03	Total/NA	Solid	8021B	36588
890-3141-15	SW04	Total/NA	Solid	8021B	36588
890-3141-16	SW05	Total/NA	Solid	8021B	36588
890-3141-17	SW06	Total/NA	Solid	8021B	36588
MB 880-36588/5-A	Method Blank	Total/NA	Solid	8021B	36588
MB 880-36678/5-A	Method Blank	Total/NA	Solid	8021B	36678
LCS 880-36588/1-A	Lab Control Sample	Total/NA	Solid	8021B	36588
LCSD 880-36588/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36588
890-3141-1 MS	FS06	Total/NA	Solid	8021B	36588
890-3141-1 MSD	FS06	Total/NA	Solid	8021B	36588

QC Association Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

GC VOA

Prep Batch: 36678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-36678/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 36699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-18	SW07	Total/NA	Solid	5035	
MB 880-36699/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36699/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36699/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20232-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-20232-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 36717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-18	SW07	Total/NA	Solid	8021B	36699
MB 880-36699/5-A	Method Blank	Total/NA	Solid	8021B	36699
LCS 880-36699/1-A	Lab Control Sample	Total/NA	Solid	8021B	36699
LCSD 880-36699/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36699
880-20232-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	36699
880-20232-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	36699

Analysis Batch: 36753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Total/NA	Solid	Total BTEX	
890-3141-2	FS07	Total/NA	Solid	Total BTEX	
890-3141-3	FS08	Total/NA	Solid	Total BTEX	
890-3141-4	FS09	Total/NA	Solid	Total BTEX	
890-3141-5	FS10	Total/NA	Solid	Total BTEX	
890-3141-6	FS11	Total/NA	Solid	Total BTEX	
890-3141-7	FS12	Total/NA	Solid	Total BTEX	
890-3141-8	FS13	Total/NA	Solid	Total BTEX	
890-3141-9	FS14	Total/NA	Solid	Total BTEX	
890-3141-10	FS15	Total/NA	Solid	Total BTEX	
890-3141-11	FS16	Total/NA	Solid	Total BTEX	
890-3141-12	SW01	Total/NA	Solid	Total BTEX	
890-3141-13	SW02	Total/NA	Solid	Total BTEX	
890-3141-14	SW03	Total/NA	Solid	Total BTEX	
890-3141-15	SW04	Total/NA	Solid	Total BTEX	
890-3141-16	SW05	Total/NA	Solid	Total BTEX	
890-3141-17	SW06	Total/NA	Solid	Total BTEX	
890-3141-18	SW07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 36220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Total/NA	Solid	8015B NM	36291
890-3141-2	FS07	Total/NA	Solid	8015B NM	36291
890-3141-3	FS08	Total/NA	Solid	8015B NM	36291
890-3141-4	FS09	Total/NA	Solid	8015B NM	36291
890-3141-5	FS10	Total/NA	Solid	8015B NM	36291
890-3141-6	FS11	Total/NA	Solid	8015B NM	36291

QC Association Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

GC Semi VOA (Continued)

Analysis Batch: 36220 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-7	FS12	Total/NA	Solid	8015B NM	36291
890-3141-8	FS13	Total/NA	Solid	8015B NM	36291
890-3141-9	FS14	Total/NA	Solid	8015B NM	36291
890-3141-10	FS15	Total/NA	Solid	8015B NM	36291
890-3141-11	FS16	Total/NA	Solid	8015B NM	36291
890-3141-12	SW01	Total/NA	Solid	8015B NM	36291
890-3141-13	SW02	Total/NA	Solid	8015B NM	36291
890-3141-14	SW03	Total/NA	Solid	8015B NM	36291
890-3141-15	SW04	Total/NA	Solid	8015B NM	36291
890-3141-16	SW05	Total/NA	Solid	8015B NM	36291
890-3141-17	SW06	Total/NA	Solid	8015B NM	36291
890-3141-18	SW07	Total/NA	Solid	8015B NM	36291
MB 880-36291/1-A	Method Blank	Total/NA	Solid	8015B NM	36291
LCS 880-36291/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36291
LCSD 880-36291/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36291
890-3141-1 MS	FS06	Total/NA	Solid	8015B NM	36291
890-3141-1 MSD	FS06	Total/NA	Solid	8015B NM	36291

Prep Batch: 36291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Total/NA	Solid	8015NM Prep	
890-3141-2	FS07	Total/NA	Solid	8015NM Prep	
890-3141-3	FS08	Total/NA	Solid	8015NM Prep	
890-3141-4	FS09	Total/NA	Solid	8015NM Prep	
890-3141-5	FS10	Total/NA	Solid	8015NM Prep	
890-3141-6	FS11	Total/NA	Solid	8015NM Prep	
890-3141-7	FS12	Total/NA	Solid	8015NM Prep	
890-3141-8	FS13	Total/NA	Solid	8015NM Prep	
890-3141-9	FS14	Total/NA	Solid	8015NM Prep	
890-3141-10	FS15	Total/NA	Solid	8015NM Prep	
890-3141-11	FS16	Total/NA	Solid	8015NM Prep	
890-3141-12	SW01	Total/NA	Solid	8015NM Prep	
890-3141-13	SW02	Total/NA	Solid	8015NM Prep	
890-3141-14	SW03	Total/NA	Solid	8015NM Prep	
890-3141-15	SW04	Total/NA	Solid	8015NM Prep	
890-3141-16	SW05	Total/NA	Solid	8015NM Prep	
890-3141-17	SW06	Total/NA	Solid	8015NM Prep	
890-3141-18	SW07	Total/NA	Solid	8015NM Prep	
MB 880-36291/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36291/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36291/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3141-1 MS	FS06	Total/NA	Solid	8015NM Prep	
890-3141-1 MSD	FS06	Total/NA	Solid	8015NM Prep	

Analysis Batch: 36359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Total/NA	Solid	8015 NM	
890-3141-2	FS07	Total/NA	Solid	8015 NM	
890-3141-3	FS08	Total/NA	Solid	8015 NM	
890-3141-4	FS09	Total/NA	Solid	8015 NM	
890-3141-5	FS10	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

GC Semi VOA (Continued)

Analysis Batch: 36359 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-6	FS11	Total/NA	Solid	8015 NM	
890-3141-7	FS12	Total/NA	Solid	8015 NM	
890-3141-8	FS13	Total/NA	Solid	8015 NM	
890-3141-9	FS14	Total/NA	Solid	8015 NM	
890-3141-10	FS15	Total/NA	Solid	8015 NM	
890-3141-11	FS16	Total/NA	Solid	8015 NM	
890-3141-12	SW01	Total/NA	Solid	8015 NM	
890-3141-13	SW02	Total/NA	Solid	8015 NM	
890-3141-14	SW03	Total/NA	Solid	8015 NM	
890-3141-15	SW04	Total/NA	Solid	8015 NM	
890-3141-16	SW05	Total/NA	Solid	8015 NM	
890-3141-17	SW06	Total/NA	Solid	8015 NM	
890-3141-18	SW07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 36241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Soluble	Solid	DI Leach	
890-3141-2	FS07	Soluble	Solid	DI Leach	
890-3141-3	FS08	Soluble	Solid	DI Leach	
890-3141-4	FS09	Soluble	Solid	DI Leach	
890-3141-5	FS10	Soluble	Solid	DI Leach	
890-3141-6	FS11	Soluble	Solid	DI Leach	
890-3141-7	FS12	Soluble	Solid	DI Leach	
890-3141-8	FS13	Soluble	Solid	DI Leach	
890-3141-9	FS14	Soluble	Solid	DI Leach	
890-3141-10	FS15	Soluble	Solid	DI Leach	
890-3141-11	FS16	Soluble	Solid	DI Leach	
890-3141-12	SW01	Soluble	Solid	DI Leach	
890-3141-13	SW02	Soluble	Solid	DI Leach	
890-3141-14	SW03	Soluble	Solid	DI Leach	
890-3141-15	SW04	Soluble	Solid	DI Leach	
890-3141-16	SW05	Soluble	Solid	DI Leach	
890-3141-17	SW06	Soluble	Solid	DI Leach	
890-3141-18	SW07	Soluble	Solid	DI Leach	
MB 880-36241/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36241/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36241/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3141-1 MS	FS06	Soluble	Solid	DI Leach	
890-3141-1 MSD	FS06	Soluble	Solid	DI Leach	
890-3141-11 MS	FS16	Soluble	Solid	DI Leach	
890-3141-11 MSD	FS16	Soluble	Solid	DI Leach	

Analysis Batch: 36597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-1	FS06	Soluble	Solid	300.0	36241
890-3141-2	FS07	Soluble	Solid	300.0	36241
890-3141-3	FS08	Soluble	Solid	300.0	36241
890-3141-4	FS09	Soluble	Solid	300.0	36241
890-3141-5	FS10	Soluble	Solid	300.0	36241

QC Association Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

HPLC/IC (Continued)

Analysis Batch: 36597 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3141-6	FS11	Soluble	Solid	300.0	36241
890-3141-7	FS12	Soluble	Solid	300.0	36241
890-3141-8	FS13	Soluble	Solid	300.0	36241
890-3141-9	FS14	Soluble	Solid	300.0	36241
890-3141-10	FS15	Soluble	Solid	300.0	36241
890-3141-11	FS16	Soluble	Solid	300.0	36241
890-3141-12	SW01	Soluble	Solid	300.0	36241
890-3141-13	SW02	Soluble	Solid	300.0	36241
890-3141-14	SW03	Soluble	Solid	300.0	36241
890-3141-15	SW04	Soluble	Solid	300.0	36241
890-3141-16	SW05	Soluble	Solid	300.0	36241
890-3141-17	SW06	Soluble	Solid	300.0	36241
890-3141-18	SW07	Soluble	Solid	300.0	36241
MB 880-36241/1-A	Method Blank	Soluble	Solid	300.0	36241
LCS 880-36241/2-A	Lab Control Sample	Soluble	Solid	300.0	36241
LCSD 880-36241/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36241
890-3141-1 MS	FS06	Soluble	Solid	300.0	36241
890-3141-1 MSD	FS06	Soluble	Solid	300.0	36241
890-3141-11 MS	FS16	Soluble	Solid	300.0	36241
890-3141-11 MSD	FS16	Soluble	Solid	300.0	36241

Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS06
Date Collected: 10/04/22 12:00
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 05:55	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/06/22 21:19	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/10/22 22:49	CH	EET MID

Client Sample ID: FS07
Date Collected: 10/04/22 12:05
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 06:21	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/06/22 22:24	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		10			36597	10/10/22 23:12	CH	EET MID

Client Sample ID: FS08
Date Collected: 10/04/22 12:10
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 06:47	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/06/22 22:46	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/10/22 23:20	CH	EET MID

Client Sample ID: FS09
Date Collected: 10/04/22 12:15
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 07:13	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS09
Date Collected: 10/04/22 12:15
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/06/22 23:07	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/10/22 23:28	CH	EET MID

Client Sample ID: FS10
Date Collected: 10/04/22 12:20
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 07:40	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/06/22 23:29	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		10			36597	10/10/22 23:35	CH	EET MID

Client Sample ID: FS11
Date Collected: 10/04/22 12:25
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 08:06	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/06/22 23:50	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/10/22 23:59	CH	EET MID

Client Sample ID: FS12
Date Collected: 10/04/22 12:30
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 08:41	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 00:11	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS12
Date Collected: 10/04/22 12:30
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/11/22 00:06	CH	EET MID

Client Sample ID: FS13
Date Collected: 10/04/22 12:35
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 12:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 00:33	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/11/22 00:14	CH	EET MID

Client Sample ID: FS14
Date Collected: 10/04/22 12:40
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 12:36	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 00:54	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/11/22 00:22	CH	EET MID

Client Sample ID: FS15
Date Collected: 10/04/22 12:45
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 13:02	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 01:15	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/11/22 00:29	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: FS16
Date Collected: 10/04/22 12:50
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 13:28	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 01:59	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		5			36597	10/11/22 00:37	CH	EET MID

Client Sample ID: SW01
Date Collected: 10/04/22 12:55
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 13:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 02:20	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		1			36597	10/11/22 01:00	CH	EET MID

Client Sample ID: SW02
Date Collected: 10/04/22 13:00
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 14:20	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 02:42	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		1			36597	10/11/22 01:08	CH	EET MID

Client Sample ID: SW03
Date Collected: 10/04/22 13:05
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 14:46	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW03
Date Collected: 10/04/22 13:05
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 03:03	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		1			36597	10/11/22 01:31	CH	EET MID

Client Sample ID: SW04
Date Collected: 10/04/22 13:10
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 15:12	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 03:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		1			36597	10/11/22 01:39	CH	EET MID

Client Sample ID: SW05
Date Collected: 10/04/22 13:15
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 15:38	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 03:47	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		1			36597	10/11/22 01:47	CH	EET MID

Client Sample ID: SW06
Date Collected: 10/04/22 13:20
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	36588	10/10/22 13:26	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36674	10/12/22 16:04	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 04:09	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Client Sample ID: SW06
Date Collected: 10/04/22 13:20
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		1			36597	10/11/22 01:54	CH	EET MID

Client Sample ID: SW07
Date Collected: 10/04/22 13:25
Date Received: 10/05/22 09:10

Lab Sample ID: 890-3141-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	36699	10/11/22 16:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36717	10/12/22 17:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			36753	10/12/22 11:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			36359	10/07/22 10:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	36291	10/06/22 15:48	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36220	10/07/22 04:30	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36241	10/06/22 09:50	CH	EET MID
Soluble	Analysis	300.0		1			36597	10/11/22 02:02	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 2A Header Main Line

Job ID: 890-3141-1
SDG: 03D2057023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3141-1	FS06	Solid	10/04/22 12:00	10/05/22 09:10	4'
890-3141-2	FS07	Solid	10/04/22 12:05	10/05/22 09:10	4'
890-3141-3	FS08	Solid	10/04/22 12:10	10/05/22 09:10	4'
890-3141-4	FS09	Solid	10/04/22 12:15	10/05/22 09:10	4'
890-3141-5	FS10	Solid	10/04/22 12:20	10/05/22 09:10	4'
890-3141-6	FS11	Solid	10/04/22 12:25	10/05/22 09:10	4'
890-3141-7	FS12	Solid	10/04/22 12:30	10/05/22 09:10	4'
890-3141-8	FS13	Solid	10/04/22 12:35	10/05/22 09:10	4'
890-3141-9	FS14	Solid	10/04/22 12:40	10/05/22 09:10	4'
890-3141-10	FS15	Solid	10/04/22 12:45	10/05/22 09:10	4'
890-3141-11	FS16	Solid	10/04/22 12:50	10/05/22 09:10	4'
890-3141-12	SW01	Solid	10/04/22 12:55	10/05/22 09:10	0-4'
890-3141-13	SW02	Solid	10/04/22 13:00	10/05/22 09:10	0-4'
890-3141-14	SW03	Solid	10/04/22 13:05	10/05/22 09:10	0-4'
890-3141-15	SW04	Solid	10/04/22 13:10	10/05/22 09:10	0-4'
890-3141-16	SW05	Solid	10/04/22 13:15	10/05/22 09:10	0-4'
890-3141-17	SW06	Solid	10/04/22 13:20	10/05/22 09:10	0-4'
890-3141-18	SW07	Solid	10/04/22 13:25	10/05/22 09:10	0-4'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	303-887-2946	Email:	kjennings@ensolum.com

Work Order Comments

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

Project Name:	MCA 2A Header Main Line	Turn Around	
Project Number:	03D2057023	☑ Routine ☐ Rush	
Project Location:	32.807923, -103.784172	Due Date:	
Sampler's Name:	Kase Parker	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TAM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.8	
Total Containers:		Corrected Temperature:	1.6	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Parameters
FS06	S	10/4/2022	12:00	4'	C	1		x	x	x	
FS07	S	10/4/2022	12:05	4'	C	1		x	x	x	
FS08	S	10/4/2022	12:10	4'	C	1		x	x	x	
FS09	S	10/4/2022	12:15	4'	C	1		x	x	x	
FS10	S	10/4/2022	12:20	4'	C	1		x	x	x	
FS11	S	10/4/2022	12:25	4'	C	1		x	x	x	
FS12	S	10/4/2022	12:30	4'	C	1		x	x	x	
~~FS13~~	~~S~~	~~10/4/2022~~	~~12:35~~	~~4'~~	~~C~~	~~1~~		~~x~~	~~x~~	~~x~~	
FS14	S	10/4/2022	12:40	4'	C	1		x	x	x	
FS15	S	10/4/2022	12:45	4'	C	1		x	x	x	

ANALYSIS REQUEST

Preservative Codes

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

Sample Comments

Incident ID:
Cost Center:
AFE:

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Amanda Short	10/5/22 0910			
3				4		
5				6		

Revised Date 08/25/2020 Rev 2020 2

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	303-887-2946	Email:	kjennings@ensolum.com

Work Order Comments

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

Project Name:	MCA 2A Header Main Line	**Turn Around**	
Project Number:	03D2057023	☑ Routine ☐ Rush	
Project Location:	32.807923, -103.784172	Due Date:	
Sampler's Name:	Kase Parker	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.8	
Total Containers:		Corrected Temperature:	1.6	

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS16	S	10/4/2022	12:50	4'	C	1		x	x	x	Incident ID:
SW03	S	10/4/2022	12:55	0-4'	C	1		x	x	x	
SW04	S	10/4/2022	13:00	0-4'	C	1		x	x	x	Cost Center:
SW05	S	10/4/2022	13:05	0-4'	C	1		x	x	x	
SW06	S	10/4/2022	13:10	0-4'	C	1		x	x	x	AFE:
SW07	S	10/4/2022	13:15	0-4'	C	1		x	x	x	
SW08	S	10/4/2022	13:20	0-4'	C	1		x	x	x	
SW09	S	10/4/2022	13:25	0-4'	C	1		x	x	x	

Parameters

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3141-1
SDG Number: 03D2057023

Login Number: 3141
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3141-1
SDG Number: 03D2057023

Login Number: 3141
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 10/06/22 10:20 AM

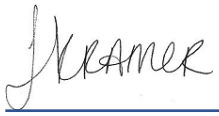
Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature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

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
11/23/2022 12:56:52 PM
Revision 1

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

ENSOLUM

APPENDIX D

FINAL C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAPP2225231205
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Maverick Permian, LLC	OGRID: 331199
Contact Name: Bryce Wagoner	Contact Telephone: 928-241-1862
Contact email: Bryce.Wagoner@mavresources.com	Incident # *(assigned by OCD)* NAPP2225231205
Contact mailing address: 1410 NW County Road Hobbs, NM 88240	

Location of Release Source

Latitude 32.807923 Longitude -103.784172

(NAD 83 in decimal degrees to 5 decimal places)

Site Name MCA 2A Main Line	Site Type
Date Release Discovered September 1, 2022	API# *(if applicable)* *30-025-00753*

Unit Letter	Section	Township	Range	County
H	29	17S	32E	Lea

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.4 bbls	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 35.1 bbls	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
The release was caused by an injection line due to possible inner corrosion. The release occurred off pad. The source of the release has been stopped and the impacted area has been secured.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2225231205
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume greater than 25 bbls.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice was given by Kalei Jennings with Ensolum on behalf of Maverick Permian via email on September 2, 2022 at 11:12AM to ocd.enviro@state.nm.us.

Initial Response

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

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

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

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

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

Printed Name: ____Bryce Wagoner _____ Title: ___Permian HSE Specialist II_____

Signature: _____ Date: __09/08/2022_____

email: _____Bryce.Wagoner@mavresources.com____ Telephone: ___928-241-1862_____

OCD Only

Received by: _____ Date: _____

NAPP2225231205

Pooled Fluids on the Surface										
	Length (ft.)	Width (ft.)	Depth (in)	# of Boundaries *edges of pool where depth is 0 . don't count shared boundaries*	Oil-Water Ratio (%)	Pooled Area (ft^2)	Estimated Average Depth (ft.)	Pooled Volume (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	60.0	10.0	4.0	4.0	0.01	600.0	0.1	8.9	0.09	8.81
Rectangle B	31.0	25.0	5.0	4.0	0.01	775.0	0.1	14.4	0.14	14.23
Rectangle C						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
							Total Volume (bbls):	**23.27**	**0.23**	**23.04**

Subsurface Fluids										
	Length (ft.)	Width (ft.)	Depth (in.)	Saturation (%) *10% in consolidated sediments after rain to 50% in sand with no precipitation*	Oil-Water Ratio (%)	Area (ft^2)	Volume (bbl.)	Estimated Volume in Subsurface (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	85.0	25.0	2.0	0.1	0.01	2125.0	63.0	5.0	0.05	5.0
Rectangle B	21.0	10.0	2.0	0.1	0.01	210.0	6.2	0.5	0.00	0.5
Rectangle C	45.0	38.0	3.0	0.1	0.01	1710.0	76.1	6.1	0.06	6.0
Rectangle D	28.0	7.0	2.0	0.1	0.01	196.0	5.8	0.5	0.00	0.5
Rectangle E	20.0	15.0	0.3	0.1	0.01	300.0	1.1	0.1	0.00	0.1
Rectangle F						0.0	0.0	0.0	0.00	0.0
Rectangle G						0.0	0.0	0.0	0.00	0.0
Rectangle H						0.0	0.0	0.0	0.00	0.0
Rectangle I						0.0	0.0	0.0	0.00	0.0
Rectangle J						0.0	0.0	0.0	0.00	0.0
							Total Volume (bbls):	**12.18**	**0.12**	**12.06**

TOTAL RELEASE VOLUME (bbls):	**35.5**

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2225231205
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?	50-100 (feet bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2225231205
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: ___Bryce Wagoner_____ Title: _Permian HSE Specialist II_____

Signature:_____ Date: __11/23/2022_____

email: _bryce.wagoner@mavresources.com _____ Telephone: ___928-241-1862_____

OCD Only

Received by: ____Jocelyn Harimon_____ Date: __11/29/2022____

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Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2225231205
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Bryce Wagoner Title: Permian HSE Specialist II

Signature: Date: 11/23/2022

email: bryce.wagoner@mavresources.com Telephone: 928-241-1862

OCD Only

Received by: Jocelyn Harimon Date: 11/29/2022

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

Closure Approved by: Jennifer Nobui Date: 01/04/2023

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ENSOLUM

APPENDIX E

NMOCD NOTIFICATIONS

Elizabeth Stuart

From: Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Sent: Thursday, September 22, 2022 3:13 PM
To: Kalei Jennings
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] Maverick- Sampling Notification (Week of 09/26/22-09/30/22)

[**EXTERNAL EMAIL**]

Kalei

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, September 22, 2022 2:08 PM
To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: Fw: [EXTERNAL] Maverick- Sampling Notification (Week of 09/26/22-09/30/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, September 22, 2022 2:04 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 09/26/22-09/30/22)

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

All,

Maverick Natural Resources plans to complete final sampling activities at the following sites the week of September 26, 2022.

Monday:
- SEMU BMT/NAPP2216134591
- MCA 2A Main Line / NAPP2225231205

Tuesday:
- SEMU BMT/NAPP2216134591
- MCA 2A Main Line / NAPP2225231205

Wednesday:

Thursday:

- MCA 94 / NAPP2212531906

Friday:

- MCA 94 / NAPP2212531906

Thank you,

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

Elizabeth Stuart

From: Morgan, Crisha A <camorgan@blm.gov>
Sent: Wednesday, September 14, 2022 9:04 PM
To: Kalei Jennings; CFO_Spill, BLM_NM
Subject: Re: [EXTERNAL] Maverick Permian-BLM Access Request-MCA 2A Main Line / Spill Date 09/01/2022
Attachments: Seed_Mixture_2 LPC.doc

[**EXTERNAL EMAIL**]

My Environmental Impact Review is as follows:
BLM Surface/Minerals
No Cave /Karst
No Archaeology survey will be required as this release falls within a pre-existing surveyed space.
This release falls within Lesser Prairie-Chicken and Dunes Sagebrush Lizard habitats. Timing restrictions will apply.
This location will require BLM Seed Mixture #2 for LPC. I have attached a copy of the seed mix requirements for your records.

Please consider this BLM's approval to move forward with deliniation and remediation of this spill.

Please let me know if you need anything further, or have any additional questions.

Crisha A. Morgan |Certified - Environmental Protection Specialist | Program Officer|COR| Spills Coordinator| Orphaned Well POC Lead
Bureau of Land Management | Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220
Cell 575-200-8648 | Office 575-234-5987 |camorgan@blm.gov

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Wednesday, September 7, 2022 3:43 PM
To: Morgan, Crisha A <camorgan@blm.gov>
Subject: [EXTERNAL] Maverick Permian-BLM Access Request-MCA 2A Main Line / Spill Date 09/01/2022

Hi Crisha,

Please see the attached documents requesting access to BLM land to remediate soil impacted by a release of produced water at MCA 2A Main Line / Spill Date 09/01/2022 located off pad at 32.807923, -103.784172.
The soil will be excavated and transported to a licensed disposal facility. All remediation activities will comply with NMOCD spill rules (19.15.29 NMAC). Equipment, materials, crew, and environmental oversight will be present on BLM land. Please see attached documents for review:

- Sundry Form 3160
- Kmz to include proposed land access area

Please let me know if you have any questions.

Thank you,

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

Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

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

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

CONDITIONS

Action 162323

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 162323
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	1/4/2023