ENSOLUM

August 3, 2022

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

Re: Closure Request
MCA 83
Incident Number NAPP2205440227
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Natural Resources, LLC (Maverick), has prepared this Closure Request to document site assessment, excavation, and soil sampling activities performed at the MCA 83 (Site). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of crude oil and produced water on pad and into the surrounding pasture. 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 NAPP2205440227.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit M, Section 23, Township 17 South, Range 32 East, in Lea County, New Mexico (32.81464° N, 103.74383° W) and is associated with oil and gas exploration and production operations on Federal Land managed by Bureau of Land Management (BLM).

On February 9, 2022, a stuffing box failure on the well head resulted in the release of approximately 2.3 barrels (bbls) of produced water and 0.6 bbls of crude oil onto the pad location and surrounding pasture. Released fluids were not recovered. The previous operator (ConocoPhillips Company) reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on February 23, 2022. The release was assigned Incident Number NAPP2205440227.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 50 feet 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-POD3,

located approximately 8,000 feet southwest of the Site. The groundwater well has a reported depth to groundwater of 83 feet bgs and a total depth of 112 feet bgs. Regionally, depth to water ranges from 75 feet to 124 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater pond, located approximately 2,748 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 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 and lease road, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 10, 2022, personnel were at the Site to complete site assessment and delineation activities based on information provided on the Form C-141 and visible surface staining observed in the release area. Six potholes were advanced (PH01 through PH06) via track-mounted backhoe to depths ranging from 1-foot to 4 feet bgs to assess for the presence or absence of impacted soil. Delineation soil samples were collected from each of the potholes at depths ranging from 1-foot to 4 feet bgs. The delineation soil samples were field screened for volatile aromatic hydrocarbons utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix B. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Additionally, four lateral delineation soil samples (SS01 through SS04) were collected around the release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix C.

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

Laboratory analytical results for lateral delineation soil samples SS01 through SS04 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria and successfully define the lateral extent of the release. Laboratory analytical results for delineation soil samples PH01 through PH06 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Additionally, laboratory analytical results for delineation soil samples PH04 through PH06, and terminal samples PH02A through PH03A, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and reclamation requirement. Visible staining within the release extent was observed, thus excavation activities appeared warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between May 12 and May 13, 2022, Ensolum personnel were at the Site to oversee site assessment and excavation activities based on information provided on the Form C-141 and intital assesment acivities. Stained soil was excavated from the release area as indicated by visible staining and field screening activities. Excavation activities were performed via hand shoveling, back-hoe, and hydrovac. To direct excavation activities, soil was field screened for volatile aromatic hydrocarbons and chloride.

Following the excavation activities, 15 5-point composite samples were collected from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS15 were collected from the floor of the excavation at a depth of 2 feet bgs. Composite soil samples SW01 through SW09 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 2 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 3. A photographic log of the excavation is included as Appendix C.

Laboratory analytical results for all confirmation soil samples were compliant with the Site Closure Criteria. Laboratory analyical results for excavation soil samples FS01, FS03, FS04, FS05, and FS06 indicated TPH and/or chloride concentrations exceeded the reclamation requirement and additional remediation activites were warranted.

Ensolum personnel returned to the Site on July 20, 2022, to oversee additional excavation activities based on laboratory analytical results for the excavation soil samples. Additional soil was removed from the vicinity of the five confirmation soil sample locations and subsequent excavation soil samples FS01A, FS03A, FS04A, FS05A, and FS06A were collected.

The excavation measured approximately 3,000 square feet in areal extent. A total of approximately 210 cubic yards of waste-containing soil was removed during the excavation activities. The stained 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.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the February 9, 2022, release of produced water and crude oil. Laboratory analytical results for the excavation soil samples indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation requirements. Additionally, the release was laterally delineated to the most stringent Table 1 Closure Criteria. Based on the laboratory 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 and the disturbed lease road area has been reconstructed.

Excavation of waste-containing soil to meet the reclamation requirement has mitigated adverse conditions at this Site. Depth to groundwater has been 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 NAPP2205440227. The Final C-141 is included in Appendix D. NMOCD communications are included as Appendix E.

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

Sincerely,
Ensolum, LLC

Kalei Jennings
Senior Scientist

Daniel, R. Moir, P.G.
Senior Managing Geologist

cc: Thomas Haigood, Maverick Natural Resources
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic / Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports
Appendix E	Final C-141
Appendix F	NMOCD Notifications

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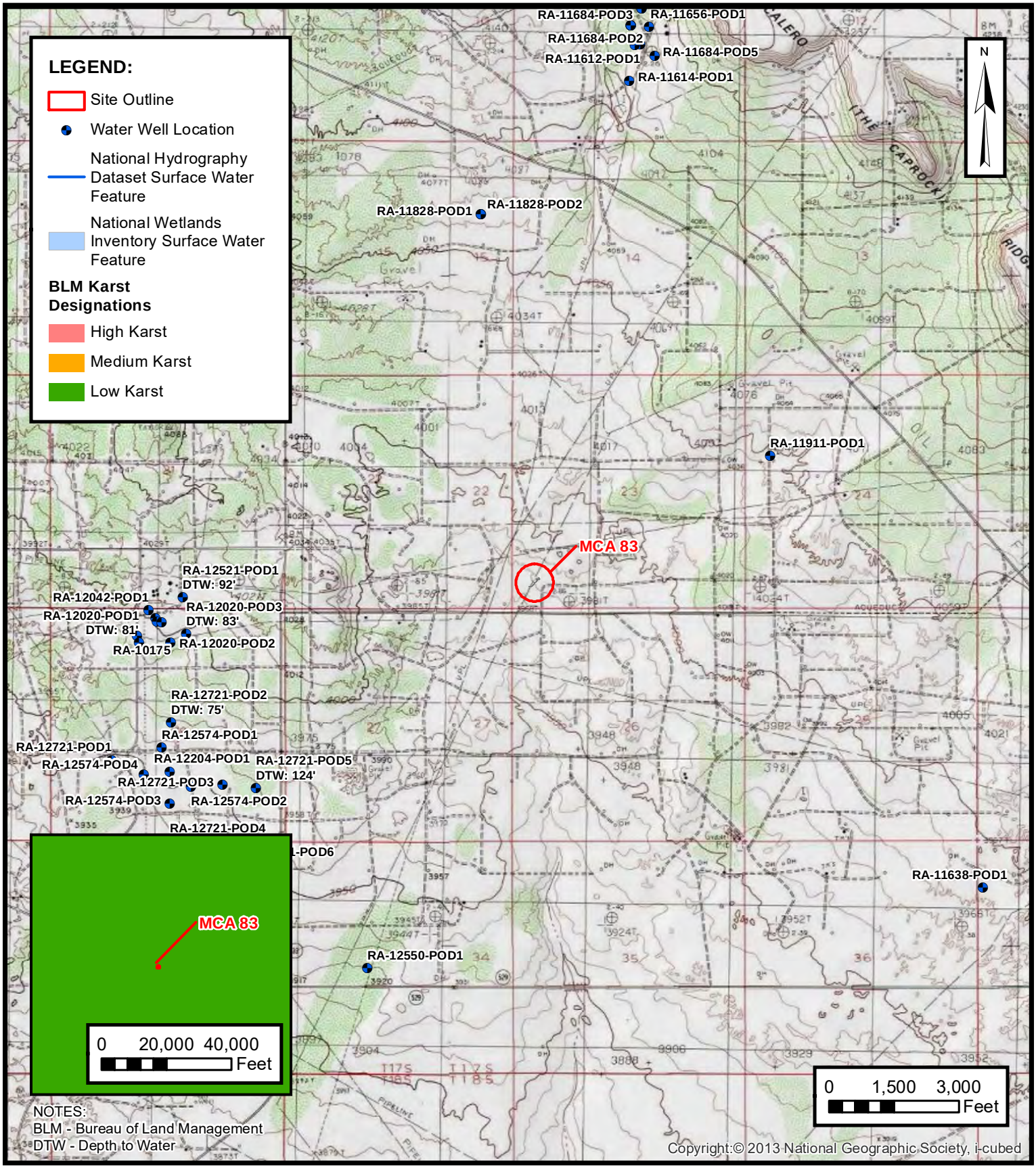
FIGURES



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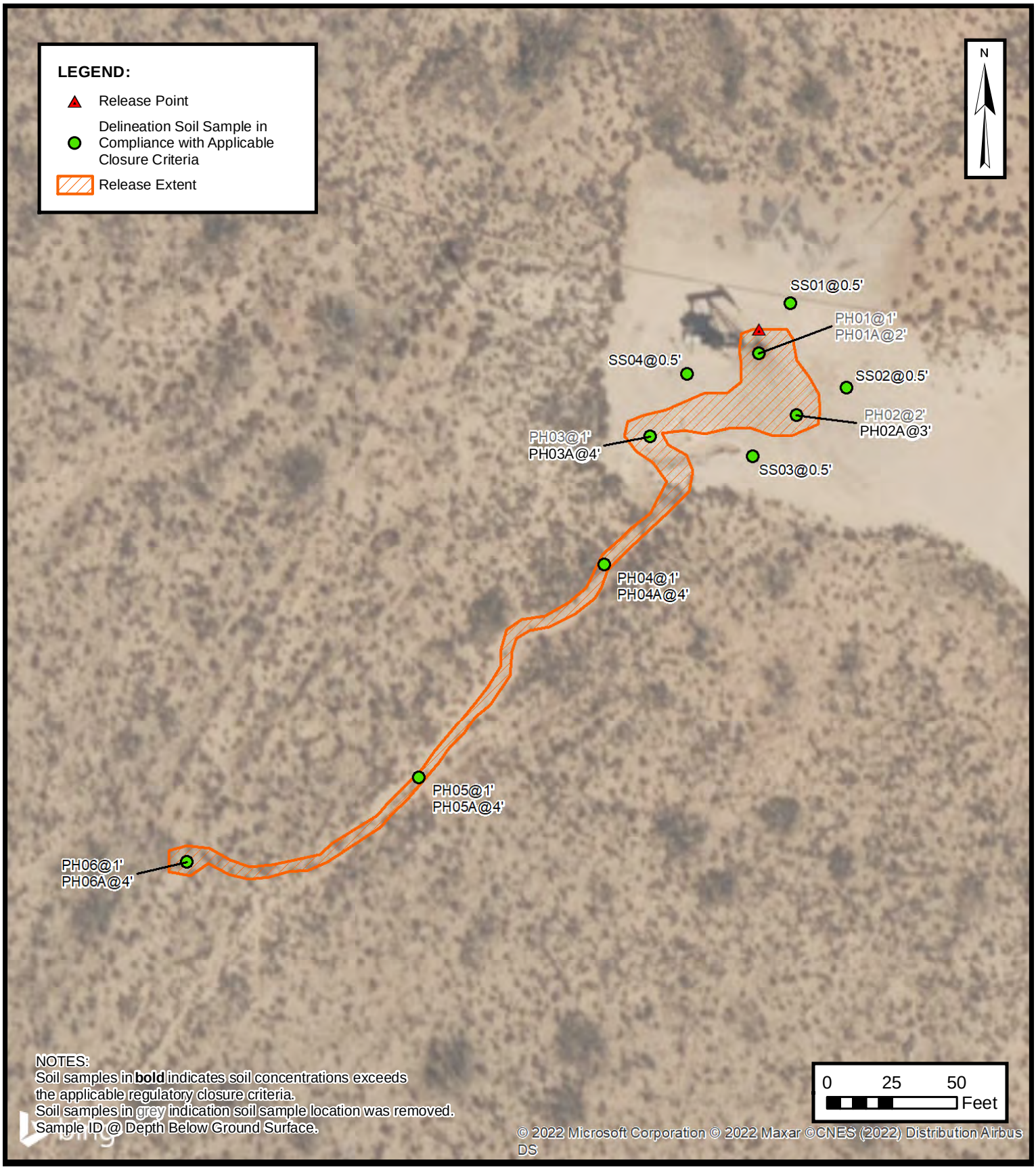
SITE RECEPTOR MAP

MAVERICK NATURAL RESOURCES, LLC
MCA 83
NAPP2205440227
Unit M, Sec 23, T17S, R32E
Lea County, New Mexico

FIGURE
1



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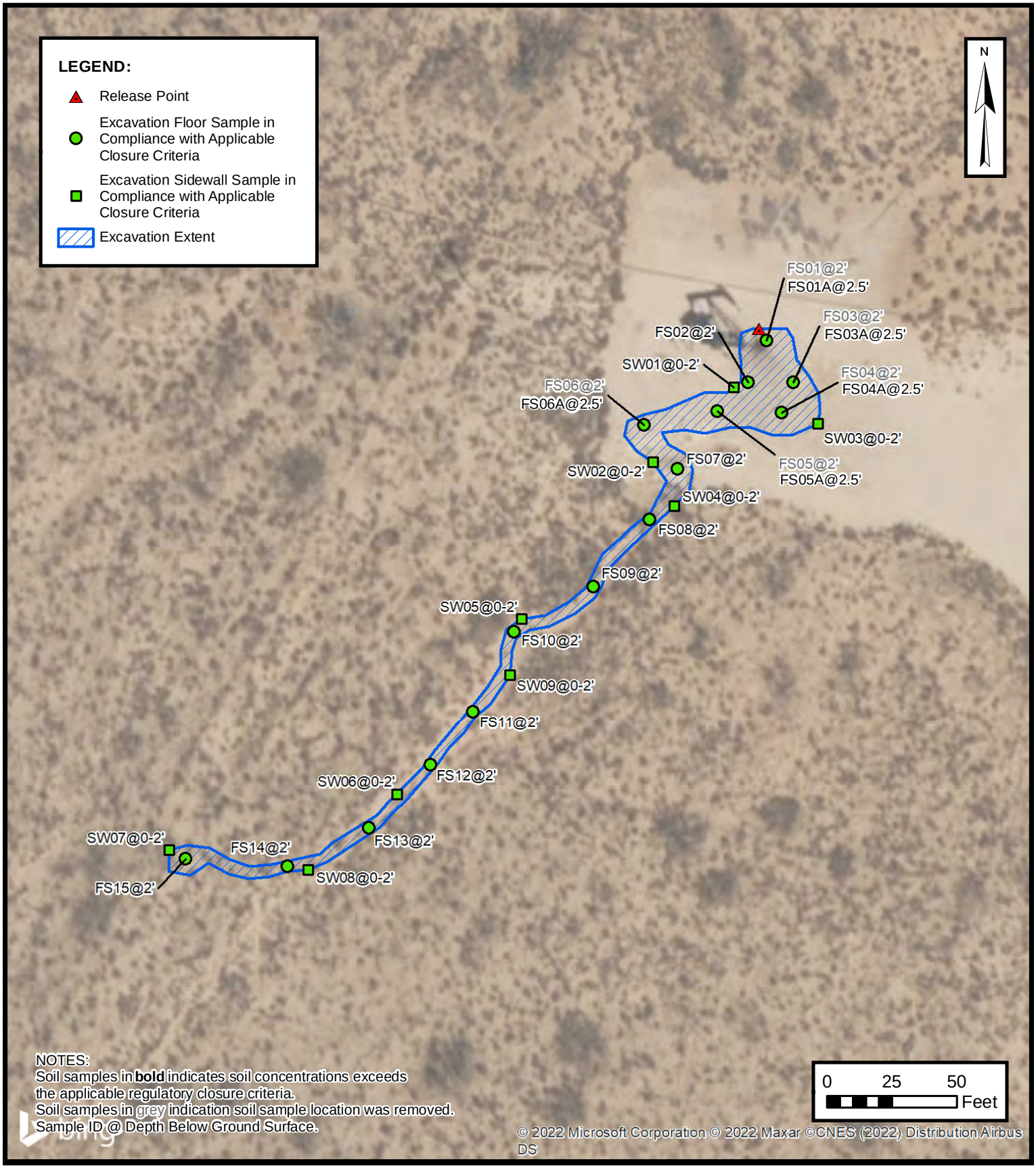
DELINEATION SOIL SAMPLE LOCATIONS

MAVERICK NATURAL RESOURCES, LLC
MCA 83
NAPP2205440227
Unit M, Sec 23, T17S, R32E
Lea County, New Mexico

FIGURE
3



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EXCAVATION SOIL SAMPLE LOCATIONS

MAVERICK NATURAL RESOURCES, LLC
MCA 83
NAPP2205440227
Unit M, Sec 23, T17S, R32E
Lea County, New Mexico

FIGURE
4

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TABLE

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MCA 83
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
Delineation Soil Samples										
PH01	05/10/2022	1.0	<0.00199	<0.00398	<50.0	90.7	<50.0	90.7	90.7	356
PH01A	05/10/2022	2.0	<0.00199	<0.00398	99.6	103	<49.9	202.6	203	31.0
PH02	05/10/2022	2.0	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	1,550
PH02A	05/10/2022	3.0	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	2.10
PH03	05/10/2022	1.0	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1,690
PH03A	05/10/2022	4.0	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	32.3
PH04	05/10/2022	1.0	<0.000403	<0.000806	<50.0	<50.0	<50.0	<50.0	<50.0	137*
PH04A	05/10/2022	4.0	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	19
PH05	05/10/2022	1.0	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	17.5*
PH05A	05/10/2022	4.0	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	5.11
PH06	05/10/2022	1.0	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	6.36*
PH06A	05/10/2022	4.0	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	<4.97
SS01	07/20/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	36.1
SS02	07/20/2022	0.5	<0.00200	0.0375	<49.9	<49.9	<49.9	<49.9	<49.9	6.58
SS03	07/20/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	18.2
SS04	07/20/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	11.1
Excavation Floor Soil Samples										
FS01	05/12/2022	2.0	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	801
FS01A	07/20/2022	2.5	<0.00201	<0.00402	<49.9	58.0	<49.9	58.0	58.0	93.7
FS02	05/12/2022	2.0	<0.00199	<0.00398	<50.0	50.7	<50.0	50.7	50.7	266
FS03	05/12/2022	2.0	<0.00198	<0.00397	<49.9	329	<49.9	329	329	893
FS03A	07/20/2022	2.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	41.9
FS04	05/12/2022	2.0	<0.00199	<0.00398	<49.9	401	<49.9	401	401	493
FS04A	07/20/2022	2.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	60.2
FS05	05/12/2022	2.0	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	2,690
FS05A	07/20/2022	2.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	30.5
FS06	05/12/2022	2.0	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	810
FS06A	07/20/2022	2.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	46.6
FS07	05/12/2022	2.0	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	135*
FS08	05/12/2022	2.0	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	14.9*

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MCA 83
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**
FS09	05/12/2022	2.0	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	74.3*
FS10	05/12/2022	2.0	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	11.3*
FS11	05/12/2022	2.0	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	14.8*
FS12	05/12/2022	2.0	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	12.0*
FS13	05/12/2022	2.0	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<5.04*
FS14	05/12/2022	2.0	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	5.58*
FS15	05/12/2022	2.0	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	115*
Excavation Sidewall Soil Samples										
SW01	05/12/2022	0 - 3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	551*
SW02	05/12/2022	0 - 3	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	10.5*
SW03	05/12/2022	0 - 3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	398*
SW04	05/12/2022	0 - 3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	13.6*
SW05	05/13/2022	0 - 2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	10.8*
SW06	05/13/2022	0 - 2	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	9.22*
SW07	05/13/2022	0 - 2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	8.13*
SW08	05/13/2022	0 - 2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	7.75*
SW09	05/13/2022	0 - 2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	9.15*

Notes:

bgs: below ground surface

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

DRO: Diesel Range Organics

I.D - identification

mg/kg: milligrams per kilogram

GRO: Gasoline Range Organics

NMOCD: New Mexico Oil Conservation Division

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

* 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

Concentrations in **bold** represent samples that exceed the applicable standard

Gray text represents samples that have been excavated

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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

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	RA 12020 POD3	2	1	2	28	17S	32E	615152	3631019

Driller License:	1456	**Driller Company:**	WHITE DRILLING COMPANY		
Driller Name:	WHITE, JOHN W				
Drill Start Date:	07/13/2015	**Drill Finish Date:**	07/15/2015	**Plug Date:**	
Log File Date:	08/10/2015	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	2.00	**Depth Well:**	112 feet	**Depth Water:**	83 feet

Water Bearing Stratifications:	Top	Bottom	Description
	70	96	Sandstone/Gravel/Conglomerate
	96	97	Sandstone/Gravel/Conglomerate
	97	101	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	73	108

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APPENDIX B

Lithologic / Soil Sampling Logs

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	Sample Name: **PH01**	Date: **05/10/2022**
	Site Name: **MCA 83**	
	Incident Number: **NAPP2205440227**	
	Job Number: 03D2057015	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: **Backhoe**
Coordinates:	Hole Diameter: NA	Total Depth: **2'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	476	0.3	Y	PH01	1	1	CCHE	dry, light brown, poorly graded sand, non-cohesive, no odor, very fine to fine.
D	<168	1.0	Y	PH01A	2	2	CCHE	SAA.

TD @ 2 feet bgs

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	Sample Name: **PH02**	Date: **05/10/2022**
	Site Name: **MCA 83**	
	Incident Number: **NAPP2205440227**	
	Job Number: 03D2057015	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: **Backhoe**
Coordinates:	Hole Diameter: NA	Total Depth: **3'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	1,741	4.0	N	PH02	2	2	CCHE	dry, light brown, poorly graded sand, non-cohesive, no odor, no staining, very fine to fine.
D	1,624	1.1	N	PH02A	3	3	CCHE	SAA.

TD @ 3 feet bgs

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	Sample Name: **PH03**	Date: **05/10/2022**
	Site Name: **MCA 83**	
	Incident Number: **NAPP2205440227**	
	Job Number: 03D2057015	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: **Backhoe**
Coordinates:	Hole Diameter: NA	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	1,741	120	N	PH03	1	1	CCHE	dry, light brown, poorly graded sand, non-cohesive, no odor, no staining, very fine to fine.
D	<168	56.6	N	PH03A	4	4	CCHE	SAA.

TD @ 4 feet bgs

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	Sample Name: **PH04**	Date: **05/10/2022**
	Site Name: **MCA 83**	
	Incident Number: **NAPP2205440227**	
	Job Number: 03D2057015	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: **Backhoe**
Coordinates:	Hole Diameter: NA	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	168	6.0	N	PH04	1	1	CCHE	dry, light brown, poorly graded sand, non-cohesive, no odor, no staining, very fine to fine.
D	<168	1.1	N	PH04A	4	4	CCHE	SAA.

TD @ 4 feet bgs

ENSOLUM

	Sample Name: **PH05**	Date: **05/10/2022**
	Site Name: **MCA 83**	
	Incident Number: **NAPP2205440227**	
	Job Number: 03D2057015	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: **Backhoe**
Coordinates:	Hole Diameter: NA	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	30.1	N	PH05	1	1	CCHE	dry, light brown, poorly graded sand, non-cohesive, no odor, no staining, very fine to fine.
D	<168	15.2	N	PH05A	4	4	CCHE	SAA.

TD @ 4 feet bgs

ENSOLUM

	Sample Name: **PH06**	Date: **05/10/2022**
	Site Name: **MCA 83**	
	Incident Number: **NAPP2205440227**	
	Job Number: 03D2057015	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: GM	Method: **Backhoe**
Coordinates:	Hole Diameter: NA	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	0.9	N	PH06	1	1	CCHE	dry, light brown, poorly graded sand, non-cohesive, no odor, no staining, very fine to fine.
D	<168	0.3	N	PH06A	4	4	CCHE	SAA.

TD @ 4 feet bgs

ENSOLUM

APPENDIX C

Photographic Log

Photographic Log
Maverick Natural Resources, LLC
MCA 83
Incident Number: NAPP2205440227

Photograph 1
Date: July 20, 2022
Description: View of remediation excavation

Photograph 2
Date: July 20, 2022
Description: View of the remediation excavation.

Photograph 3
Date: July 20, 2022
Description: View of remediation excavation

Photograph 4
Date: July 20, 2022
Description: View of remediation excavation

ENSOLUM

APPENDIX D

Laboratory Analytical Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2299-1
Laboratory Sample Delivery Group: 03D2024024
Client Project/Site: MCA 83

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/17/2022 1:18:45 PM

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

Client: Ensolum
Project/Site: MCA 83

Laboratory Job ID: 890-2299-1
SDG: 03D2024024

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 83

Job ID: 890-2299-1
SDG: 03D2024024

Job ID: 890-2299-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2299-1

Receipt
The samples were received on 5/11/2022 11:24 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-25635 and analytical batch 880-25594 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
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 880-25450 and analytical batch 880-25617 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 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH01

Date Collected: 05/10/22 11:55
Date Received: 05/11/22 11:24
Sample Depth: 1

Lab Sample ID: 890-2299-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:18	05/17/22 05:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:18	05/17/22 05:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 13:18*	*05/17/22 05:31*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/16/22 13:18*	*05/17/22 05:31*	*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			05/17/22 11:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**90.7**		50.0		mg/Kg			05/16/22 11:36	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		05/12/22 13:37	05/14/22 00:42	1
Diesel Range Organics (Over C10-C28)	**90.7**		50.0		mg/Kg		05/12/22 13:37	05/14/22 00:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 00:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*05/12/22 13:37*	*05/14/22 00:42*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/12/22 13:37*	*05/14/22 00:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**356**		5.01		mg/Kg			05/16/22 21:12	1

Client Sample ID: PH01

Date Collected: 05/10/22 12:00
Date Received: 05/11/22 11:24
Sample Depth: 2

Lab Sample ID: 890-2299-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:18	05/17/22 05:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 05:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:18	05/17/22 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/22 13:18*	*05/17/22 05:57*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH01

Lab Sample ID: 890-2299-2
Matrix: Solid
Date Collected: 05/10/22 12:00
Date Received: 05/11/22 11:24
Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/16/22 13:18*	*05/17/22 05:57*	*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			05/17/22 11:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**203**		49.9	mg/Kg			05/16/22 11:36	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	**99.6**		49.9	mg/Kg		05/12/22 13:37	05/14/22 00:21	1
Diesel Range Organics (Over C10-C28)	**103**		49.9	mg/Kg		05/12/22 13:37	05/14/22 00:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/12/22 13:37	05/14/22 00:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*100*		*70 - 130*	*05/12/22 13:37*	*05/14/22 00:21*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/12/22 13:37*	*05/14/22 00:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31.0**		4.99	mg/Kg			05/16/22 21:22	1

Client Sample ID: PH02

Lab Sample ID: 890-2299-3
Matrix: Solid
Date Collected: 05/10/22 11:45
Date Received: 05/11/22 11:24
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:18	05/17/22 06:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:18	05/17/22 06:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:18	05/17/22 06:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/16/22 13:18	05/17/22 06:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:18	05/17/22 06:24	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/16/22 13:18	05/17/22 06:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/16/22 13:18*	*05/17/22 06:24*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/16/22 13:18*	*05/17/22 06:24*	*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			05/17/22 11:37	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			05/16/22 11:36	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH02

Lab Sample ID: 890-2299-3
Matrix: Solid
Date Collected: 05/10/22 11:45
Date Received: 05/11/22 11:24
Sample Depth: 2

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		05/12/22 13:37	05/14/22 01:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 01:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*05/12/22 13:37*	*05/14/22 01:03*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/12/22 13:37*	*05/14/22 01:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1550**		24.9		mg/Kg			05/16/22 21:31	5

Client Sample ID: PH02

Lab Sample ID: 890-2299-4
Matrix: Solid
Date Collected: 05/10/22 11:50
Date Received: 05/11/22 11:24
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:18	05/17/22 06:51	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:18	05/17/22 06:51	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:18	05/17/22 06:51	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/16/22 13:18	05/17/22 06:51	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:18	05/17/22 06:51	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/16/22 13:18	05/17/22 06:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/16/22 13:18*	*05/17/22 06:51*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*05/16/22 13:18*	*05/17/22 06:51*	*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			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 01:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 01:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*05/12/22 13:37*	*05/14/22 01:25*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/12/22 13:37*	*05/14/22 01:25*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH02

Lab Sample ID: 890-2299-4
Matrix: Solid
Date Collected: 05/10/22 11:50
Date Received: 05/11/22 11:24
Sample Depth: 3

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.10		24.9		mg/Kg			05/16/22 21:59	5

Client Sample ID: PH03

Lab Sample ID: 890-2299-5
Matrix: Solid
Date Collected: 05/10/22 12:05
Date Received: 05/11/22 11:24
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/22 13:18	05/17/22 07:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:17	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/22 13:18	05/17/22 07:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 13:18*	*05/17/22 07:17*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*05/16/22 13:18*	*05/17/22 07:17*	*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			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 01:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 01:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/12/22 13:37*	*05/14/22 01:46*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/12/22 13:37*	*05/14/22 01:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1690		24.8		mg/Kg			05/16/22 22:08	5

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH03

Date Collected: 05/10/22 12:10
Date Received: 05/11/22 11:24
Sample Depth: 4

Lab Sample ID: 890-2299-6

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:44	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/16/22 13:18	05/17/22 07:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 07:44	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/16/22 13:18	05/17/22 07:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/16/22 13:18*	*05/17/22 07:44*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*05/16/22 13:18*	*05/17/22 07:44*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 02:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 02:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 02:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*05/12/22 13:37*	*05/14/22 02:08*	*1*
o-Terphenyl	*108*		*70 - 130*	*05/12/22 13:37*	*05/14/22 02:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.3**		4.96		mg/Kg			05/16/22 22:17	1

Client Sample ID: PH04

Date Collected: 05/10/22 13:45
Date Received: 05/11/22 11:24
Sample Depth: 1

Lab Sample ID: 890-2299-7

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000403	U	0.000403		mg/Kg		05/16/22 13:18	05/17/22 08:11	1
Toluene	<0.000403	U	0.000403		mg/Kg		05/16/22 13:18	05/17/22 08:11	1
Ethylbenzene	<0.000403	U	0.000403		mg/Kg		05/16/22 13:18	05/17/22 08:11	1
m-Xylene & p-Xylene	<0.000806	U	0.000806		mg/Kg		05/16/22 13:18	05/17/22 08:11	1
o-Xylene	<0.000403	U	0.000403		mg/Kg		05/16/22 13:18	05/17/22 08:11	1
Xylenes, Total	<0.000806	U	0.000806		mg/Kg		05/16/22 13:18	05/17/22 08:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/16/22 13:18*	*05/17/22 08:11*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH04

Date Collected: 05/10/22 13:45
Date Received: 05/11/22 11:24
Sample Depth: 1

Lab Sample ID: 890-2299-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*05/16/22 13:18*	*05/17/22 08:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.000806	U	0.000806		mg/Kg			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 02:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 02:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 02:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*05/12/22 13:37*	*05/14/22 02:29*	*1*
o-Terphenyl	*80*		*70 - 130*	*05/12/22 13:37*	*05/14/22 02:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**137**		5.05		mg/Kg			05/16/22 22:26	1

Client Sample ID: PH04

Date Collected: 05/10/22 13:50
Date Received: 05/11/22 11:24
Sample Depth: 4

Lab Sample ID: 890-2299-8
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 08:38	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 08:38	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 08:38	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/22 13:18	05/17/22 08:38	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 08:38	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/22 13:18	05/17/22 08:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/16/22 13:18*	*05/17/22 08:38*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/16/22 13:18*	*05/17/22 08:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/17/22 11:37	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			05/16/22 11:36	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH04

Lab Sample ID: 890-2299-8
Matrix: Solid
Date Collected: 05/10/22 13:50
Date Received: 05/11/22 11:24
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		05/12/22 13:37	05/14/22 02:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 02:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 02:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/12/22 13:37*	*05/14/22 02:51*	*1*
o-Terphenyl	*102*		*70 - 130*	*05/12/22 13:37*	*05/14/22 02:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19.0**		4.99		mg/Kg			05/16/22 22:35	1

Client Sample ID: PH05

Lab Sample ID: 890-2299-9
Matrix: Solid
Date Collected: 05/10/22 14:00
Date Received: 05/11/22 11:24
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 10:26	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 10:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 10:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/22 13:18	05/17/22 10:26	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:18	05/17/22 10:26	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/22 13:18	05/17/22 10:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/16/22 13:18*	*05/17/22 10:26*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/16/22 13:18*	*05/17/22 10:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 03:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 03:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*05/12/22 13:37*	*05/14/22 03:34*	*1*
o-Terphenyl	*83*		*70 - 130*	*05/12/22 13:37*	*05/14/22 03:34*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH05

Date Collected: 05/10/22 14:00
Date Received: 05/11/22 11:24
Sample Depth: 1

Lab Sample ID: 890-2299-9

Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.5	F1	4.95		mg/Kg			05/16/22 22:45	1

Client Sample ID: PH05

Date Collected: 05/10/22 14:05
Date Received: 05/11/22 11:24
Sample Depth: 4

Lab Sample ID: 890-2299-10

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 10:52	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 10:52	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 10:52	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/16/22 13:18	05/17/22 10:52	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 10:52	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/16/22 13:18	05/17/22 10:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 13:18*	*05/17/22 10:52*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/16/22 13:18*	*05/17/22 10:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 03:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 03:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 03:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*05/12/22 13:37*	*05/14/22 03:55*	*1*
o-Terphenyl	*94*		*70 - 130*	*05/12/22 13:37*	*05/14/22 03:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.11		4.98		mg/Kg			05/16/22 23:12	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH06

Lab Sample ID: 890-2299-11
Matrix: Solid
Date Collected: 05/10/22 14:40
Date Received: 05/11/22 11:24
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 11:19	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 11:19	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 11:19	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/16/22 13:18	05/17/22 11:19	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:18	05/17/22 11:19	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/16/22 13:18	05/17/22 11:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/16/22 13:18*	*05/17/22 11:19*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/16/22 13:18*	*05/17/22 11:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 04:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 04:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/14/22 04:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/12/22 13:37*	*05/14/22 04:17*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/12/22 13:37*	*05/14/22 04:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.36**		4.99		mg/Kg			05/16/22 23:21	1

Client Sample ID: PH06

Lab Sample ID: 890-2299-12
Matrix: Solid
Date Collected: 05/10/22 14:45
Date Received: 05/11/22 11:24
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		05/16/22 13:18	05/17/22 11:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 11:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 11:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/22 13:18	05/17/22 11:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 11:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/22 13:18	05/17/22 11:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 13:18*	*05/17/22 11:45*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH06
Date Collected: 05/10/22 14:45
Date Received: 05/11/22 11:24
Sample Depth: 4

Lab Sample ID: 890-2299-12
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*05/16/22 13:18*	*05/17/22 11:45*	*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			05/17/22 11:37	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			05/16/22 11:36	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		05/12/22 13:37	05/14/22 04:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 04:38	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/22 13:37	05/14/22 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*05/12/22 13:37*	*05/14/22 04:38*	*1*
o-Terphenyl	*96*		*70 - 130*	*05/12/22 13:37*	*05/14/22 04:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97		mg/Kg			05/16/22 23:49	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2298-A-1-H MS	Matrix Spike	102	91
890-2298-A-1-I MSD	Matrix Spike Duplicate	105	97
890-2299-1	PH01	110	90
890-2299-2	PH01	102	99
890-2299-3	PH02	103	90
890-2299-4	PH02	108	102
890-2299-5	PH03	110	102
890-2299-6	PH03	109	102
890-2299-7	PH04	113	104
890-2299-8	PH04	104	100
890-2299-9	PH05	109	100
890-2299-10	PH05	110	99
890-2299-11	PH06	107	99
890-2299-12	PH06	110	89
LCS 880-25635/1-A	Lab Control Sample	102	91
LCSD 880-25635/2-A	Lab Control Sample Dup	102	99
MB 880-25602/5-A	Method Blank	79	91
MB 880-25635/5-A	Method Blank	81	90

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)
890-2298-A-1-B MS	Matrix Spike	109	95
890-2298-A-1-C MSD	Matrix Spike Duplicate	93	78
890-2299-1	PH01	94	100
890-2299-2	PH01	100	101
890-2299-3	PH02	97	104
890-2299-4	PH02	101	106
890-2299-5	PH03	100	99
890-2299-6	PH03	110	108
890-2299-7	PH04	86	80
890-2299-8	PH04	106	102
890-2299-9	PH05	84	83
890-2299-10	PH05	90	94
890-2299-11	PH06	95	99
890-2299-12	PH06	94	96
LCS 880-25433/2-A	Lab Control Sample	124	106
LCSD 880-25433/3-A	Lab Control Sample Dup	114	101
MB 880-25433/1-A	Method Blank	105	113

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25602/5-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25602

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 09:29	05/16/22 14:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*05/16/22 09:29*	*05/16/22 14:48*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/16/22 09:29*	*05/16/22 14:48*	*1*

Lab Sample ID: MB 880-25635/5-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25635

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:18	05/17/22 04:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*05/16/22 13:18*	*05/17/22 04:14*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/16/22 13:18*	*05/17/22 04:14*	*1*

Lab Sample ID: LCS 880-25635/1-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25635

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09113		mg/Kg		91	70 - 130		
Toluene			0.100	0.09419		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.09152		mg/Kg		92	70 - 130		
m-Xylene & p-Xylene			0.200	0.1841		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09210		mg/Kg		92	70 - 130		

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

Lab Sample ID: LCSD 880-25635/2-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25635

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09243		mg/Kg		92	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

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

Lab Sample ID: LCSD 880-25635/2-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25635

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09593		mg/Kg		96	70 - 130	2	35
Ethylbenzene			0.100	0.09455		mg/Kg		95	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1917		mg/Kg		96	70 - 130	4	35
o-Xylene			0.100	0.09558		mg/Kg		96	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2298-A-1-H MS
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25635

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F1	0.100	0.03705	F1	mg/Kg		37	70 - 130
Toluene	<0.00202	U F1	0.100	0.04088	F1	mg/Kg		41	70 - 130
Ethylbenzene	<0.00202	U F1	0.100	0.04240	F1	mg/Kg		42	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.200	0.08535	F1	mg/Kg		43	70 - 130
o-Xylene	<0.00202	U F1	0.100	0.04443	F1	mg/Kg		44	70 - 130

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

Lab Sample ID: 890-2298-A-1-I MSD
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25635

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0996	0.04559	F1	mg/Kg		46	70 - 130	21	35
Toluene	<0.00202	U F1	0.0996	0.04983	F1	mg/Kg		50	70 - 130	20	35
Ethylbenzene	<0.00202	U F1	0.0996	0.05013	F1	mg/Kg		50	70 - 130	17	35
m-Xylene & p-Xylene	<0.00403	U F1	0.199	0.1019	F1	mg/Kg		51	70 - 130	18	35
o-Xylene	<0.00202	U F1	0.0996	0.05180	F1	mg/Kg		52	70 - 130	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-25433/1-A
Matrix: Solid
Analysis Batch: 25490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25433

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/13/22 21:51	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

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

Lab Sample ID: MB 880-25433/1-A
Matrix: Solid
Analysis Batch: 25490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25433

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/13/22 21:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/22 13:37	05/13/22 21:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*05/12/22 13:37*	*05/13/22 21:51*	*1*
o-Terphenyl	*113*		*70 - 130*	*05/12/22 13:37*	*05/13/22 21:51*	*1*

Lab Sample ID: LCS 880-25433/2-A
Matrix: Solid
Analysis Batch: 25490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25433

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	983.1		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1215		mg/Kg		121	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*124*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-25433/3-A
Matrix: Solid
Analysis Batch: 25490

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25433

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	877.0		mg/Kg		88	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	1062		mg/Kg		106	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 890-2298-A-1-B MS
Matrix: Solid
Analysis Batch: 25490

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25433

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1070		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1102		mg/Kg		108	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

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

Lab Sample ID: 890-2298-A-1-C MSD
Matrix: Solid
Analysis Batch: 25490

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25433

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	914.6		mg/Kg		90	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	897.8		mg/Kg		88	70 - 130	20	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25450/1-A
Matrix: Solid
Analysis Batch: 25617

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/16/22 20:08	1

Lab Sample ID: LCS 880-25450/2-A
Matrix: Solid
Analysis Batch: 25617

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	242.1		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-25450/3-A
Matrix: Solid
Analysis Batch: 25617

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	244.5		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 890-2299-9 MS
Matrix: Solid
Analysis Batch: 25617

Client Sample ID: PH05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	17.5	F1	248	238.1	F1	mg/Kg		89	90 - 110		

Lab Sample ID: 890-2299-9 MSD
Matrix: Solid
Analysis Batch: 25617

Client Sample ID: PH05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	17.5	F1	248	253.3		mg/Kg		95	90 - 110	6	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

GC VOA

Analysis Batch: 25594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Total/NA	Solid	8021B	25635
890-2299-2	PH01	Total/NA	Solid	8021B	25635
890-2299-3	PH02	Total/NA	Solid	8021B	25635
890-2299-4	PH02	Total/NA	Solid	8021B	25635
890-2299-5	PH03	Total/NA	Solid	8021B	25635
890-2299-6	PH03	Total/NA	Solid	8021B	25635
890-2299-7	PH04	Total/NA	Solid	8021B	25635
890-2299-8	PH04	Total/NA	Solid	8021B	25635
890-2299-9	PH05	Total/NA	Solid	8021B	25635
890-2299-10	PH05	Total/NA	Solid	8021B	25635
890-2299-11	PH06	Total/NA	Solid	8021B	25635
890-2299-12	PH06	Total/NA	Solid	8021B	25635
MB 880-25602/5-A	Method Blank	Total/NA	Solid	8021B	25602
MB 880-25635/5-A	Method Blank	Total/NA	Solid	8021B	25635
LCS 880-25635/1-A	Lab Control Sample	Total/NA	Solid	8021B	25635
LCSD 880-25635/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25635
890-2298-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	25635
890-2298-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25635

Prep Batch: 25602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25602/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 25635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Total/NA	Solid	5035	
890-2299-2	PH01	Total/NA	Solid	5035	
890-2299-3	PH02	Total/NA	Solid	5035	
890-2299-4	PH02	Total/NA	Solid	5035	
890-2299-5	PH03	Total/NA	Solid	5035	
890-2299-6	PH03	Total/NA	Solid	5035	
890-2299-7	PH04	Total/NA	Solid	5035	
890-2299-8	PH04	Total/NA	Solid	5035	
890-2299-9	PH05	Total/NA	Solid	5035	
890-2299-10	PH05	Total/NA	Solid	5035	
890-2299-11	PH06	Total/NA	Solid	5035	
890-2299-12	PH06	Total/NA	Solid	5035	
MB 880-25635/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25635/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25635/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2298-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
890-2298-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 25724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Total/NA	Solid	Total BTEX	
890-2299-2	PH01	Total/NA	Solid	Total BTEX	
890-2299-3	PH02	Total/NA	Solid	Total BTEX	
890-2299-4	PH02	Total/NA	Solid	Total BTEX	
890-2299-5	PH03	Total/NA	Solid	Total BTEX	
890-2299-6	PH03	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

GC VOA (Continued)

Analysis Batch: 25724 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-7	PH04	Total/NA	Solid	Total BTEX	
890-2299-8	PH04	Total/NA	Solid	Total BTEX	
890-2299-9	PH05	Total/NA	Solid	Total BTEX	
890-2299-10	PH05	Total/NA	Solid	Total BTEX	
890-2299-11	PH06	Total/NA	Solid	Total BTEX	
890-2299-12	PH06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 25433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Total/NA	Solid	8015NM Prep	
890-2299-2	PH01	Total/NA	Solid	8015NM Prep	
890-2299-3	PH02	Total/NA	Solid	8015NM Prep	
890-2299-4	PH02	Total/NA	Solid	8015NM Prep	
890-2299-5	PH03	Total/NA	Solid	8015NM Prep	
890-2299-6	PH03	Total/NA	Solid	8015NM Prep	
890-2299-7	PH04	Total/NA	Solid	8015NM Prep	
890-2299-8	PH04	Total/NA	Solid	8015NM Prep	
890-2299-9	PH05	Total/NA	Solid	8015NM Prep	
890-2299-10	PH05	Total/NA	Solid	8015NM Prep	
890-2299-11	PH06	Total/NA	Solid	8015NM Prep	
890-2299-12	PH06	Total/NA	Solid	8015NM Prep	
MB 880-25433/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25433/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25433/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2298-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2298-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Total/NA	Solid	8015B NM	25433
890-2299-2	PH01	Total/NA	Solid	8015B NM	25433
890-2299-3	PH02	Total/NA	Solid	8015B NM	25433
890-2299-4	PH02	Total/NA	Solid	8015B NM	25433
890-2299-5	PH03	Total/NA	Solid	8015B NM	25433
890-2299-6	PH03	Total/NA	Solid	8015B NM	25433
890-2299-7	PH04	Total/NA	Solid	8015B NM	25433
890-2299-8	PH04	Total/NA	Solid	8015B NM	25433
890-2299-9	PH05	Total/NA	Solid	8015B NM	25433
890-2299-10	PH05	Total/NA	Solid	8015B NM	25433
890-2299-11	PH06	Total/NA	Solid	8015B NM	25433
890-2299-12	PH06	Total/NA	Solid	8015B NM	25433
MB 880-25433/1-A	Method Blank	Total/NA	Solid	8015B NM	25433
LCS 880-25433/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25433
LCSD 880-25433/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25433
890-2298-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	25433
890-2298-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25433

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

GC Semi VOA

Analysis Batch: 25623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Total/NA	Solid	8015 NM	
890-2299-2	PH01	Total/NA	Solid	8015 NM	
890-2299-3	PH02	Total/NA	Solid	8015 NM	
890-2299-4	PH02	Total/NA	Solid	8015 NM	
890-2299-5	PH03	Total/NA	Solid	8015 NM	
890-2299-6	PH03	Total/NA	Solid	8015 NM	
890-2299-7	PH04	Total/NA	Solid	8015 NM	
890-2299-8	PH04	Total/NA	Solid	8015 NM	
890-2299-9	PH05	Total/NA	Solid	8015 NM	
890-2299-10	PH05	Total/NA	Solid	8015 NM	
890-2299-11	PH06	Total/NA	Solid	8015 NM	
890-2299-12	PH06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 25450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Soluble	Solid	DI Leach	
890-2299-2	PH01	Soluble	Solid	DI Leach	
890-2299-3	PH02	Soluble	Solid	DI Leach	
890-2299-4	PH02	Soluble	Solid	DI Leach	
890-2299-5	PH03	Soluble	Solid	DI Leach	
890-2299-6	PH03	Soluble	Solid	DI Leach	
890-2299-7	PH04	Soluble	Solid	DI Leach	
890-2299-8	PH04	Soluble	Solid	DI Leach	
890-2299-9	PH05	Soluble	Solid	DI Leach	
890-2299-10	PH05	Soluble	Solid	DI Leach	
890-2299-11	PH06	Soluble	Solid	DI Leach	
890-2299-12	PH06	Soluble	Solid	DI Leach	
MB 880-25450/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25450/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25450/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2299-9 MS	PH05	Soluble	Solid	DI Leach	
890-2299-9 MSD	PH05	Soluble	Solid	DI Leach	

Analysis Batch: 25617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2299-1	PH01	Soluble	Solid	300.0	25450
890-2299-2	PH01	Soluble	Solid	300.0	25450
890-2299-3	PH02	Soluble	Solid	300.0	25450
890-2299-4	PH02	Soluble	Solid	300.0	25450
890-2299-5	PH03	Soluble	Solid	300.0	25450
890-2299-6	PH03	Soluble	Solid	300.0	25450
890-2299-7	PH04	Soluble	Solid	300.0	25450
890-2299-8	PH04	Soluble	Solid	300.0	25450
890-2299-9	PH05	Soluble	Solid	300.0	25450
890-2299-10	PH05	Soluble	Solid	300.0	25450
890-2299-11	PH06	Soluble	Solid	300.0	25450
890-2299-12	PH06	Soluble	Solid	300.0	25450
MB 880-25450/1-A	Method Blank	Soluble	Solid	300.0	25450
LCS 880-25450/2-A	Lab Control Sample	Soluble	Solid	300.0	25450

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

HPLC/IC (Continued)

Analysis Batch: 25617 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-25450/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25450
890-2299-9 MS	PH05	Soluble	Solid	300.0	25450
890-2299-9 MSD	PH05	Soluble	Solid	300.0	25450

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH01
Date Collected: 05/10/22 11:55
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 05:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 00:42	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 21:12	CH	XEN MID

Client Sample ID: PH01
Date Collected: 05/10/22 12:00
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 05:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 00:21	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 21:22	CH	XEN MID

Client Sample ID: PH02
Date Collected: 05/10/22 11:45
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 06:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 01:03	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		5			25617	05/16/22 21:31	CH	XEN MID

Client Sample ID: PH02
Date Collected: 05/10/22 11:50
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 06:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH02
Date Collected: 05/10/22 11:50
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-4
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			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 01:25	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		5			25617	05/16/22 21:59	CH	XEN MID

Client Sample ID: PH03
Date Collected: 05/10/22 12:05
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 07:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 01:46	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		5			25617	05/16/22 22:08	CH	XEN MID

Client Sample ID: PH03
Date Collected: 05/10/22 12:10
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 07:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 02:08	SM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 22:17	CH	XEN MID

Client Sample ID: PH04
Date Collected: 05/10/22 13:45
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	1.0 mL	25594	05/17/22 08:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 02:29	SM	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH04
Date Collected: 05/10/22 13:45
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-7
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			4.95 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 22:26	CH	XEN MID

Client Sample ID: PH04
Date Collected: 05/10/22 13:50
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 08:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 02:51	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 22:35	CH	XEN MID

Client Sample ID: PH05
Date Collected: 05/10/22 14:00
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-9
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			4.97 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 10:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 03:34	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 22:45	CH	XEN MID

Client Sample ID: PH05
Date Collected: 05/10/22 14:05
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-10
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			4.95 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 10:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 03:55	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 23:12	CH	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Client Sample ID: PH06

Date Collected: 05/10/22 14:40
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-11

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			4.96 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 11:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 04:17	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 23:21	CH	XEN MID

Client Sample ID: PH06

Date Collected: 05/10/22 14:45
Date Received: 05/11/22 11:24

Lab Sample ID: 890-2299-12

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	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 11:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25724	05/17/22 11:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25623	05/16/22 11:36	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25433	05/12/22 13:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25490	05/14/22 04:38	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25450	05/12/22 15:26	CH	XEN MID
Soluble	Analysis	300.0		1			25617	05/16/22 23:49	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

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	T104704400-21-22	06-30-22

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 83

Job ID: 890-2299-1
SDG: 03D2024024

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2299-1
SDG: 03D2024024

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2299-1	PH01	Solid	05/10/22 11:55	05/11/22 11:24	1
890-2299-2	PH01	Solid	05/10/22 12:00	05/11/22 11:24	2
890-2299-3	PH02	Solid	05/10/22 11:45	05/11/22 11:24	2
890-2299-4	PH02	Solid	05/10/22 11:50	05/11/22 11:24	3
890-2299-5	PH03	Solid	05/10/22 12:05	05/11/22 11:24	1
890-2299-6	PH03	Solid	05/10/22 12:10	05/11/22 11:24	4
890-2299-7	PH04	Solid	05/10/22 13:45	05/11/22 11:24	1
890-2299-8	PH04	Solid	05/10/22 13:50	05/11/22 11:24	4
890-2299-9	PH05	Solid	05/10/22 14:00	05/11/22 11:24	1
890-2299-10	PH05	Solid	05/10/22 14:05	05/11/22 11:24	4
890-2299-11	PH06	Solid	05/10/22 14:40	05/11/22 11:24	1
890-2299-12	PH06	Solid	05/10/22 14:45	05/11/22 11:24	4

Chain of Custody

eurofins | Environment Testing Xenco

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	705 W Wadley Ave. Suite 240	Address:	705 W Wadley Ave. Suite 240
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, TX 79705
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 83	Turn Around	
Project Number:	03D2024024	☑ Routine ☐ Rush	
Project Location:	Rural Lea	Due Date:	5 day TAT
Sampler's Name:	Gilbert Moreno	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:	TM009	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.8	
Total Containers:		Corrected Temperature:	5.6	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
PH01	S	5.10.22	11:55	1'	Comp	1		X	X	X	
PH01	S	5.10.22	12:00	2'	Comp	1		X	X	X	
PH02	S	5.10.22	11:45	2'	Comp	1		X	X	X	
PH02	S	5.10.22	11:50	3'	Comp	1		X	X	X	
PH03	S	5.10.22	12:05	1'	Comp	1		X	X	X	
PH03	S	5.10.22	12:10	4'	Comp	1		X	X	X	
PH04	S	5.10.22	13:45	1'	Comp	1		X	X	X	
PH04	S	5.10.22	13:50	4'	Comp	1		X	X	X	
PH05	S	5.10.22	14:00	1'	Comp	1		X	X	X	
PH05	S	5.10.22	14:05	4'	Comp	1		X	X	X	

890-2299 Chain of Custody

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

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	Anna Byers	5/11/22 @ 1055	2 Anna Byers		5.11.22 1124
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2299-1
SDG Number: 03D2024024

Login Number: 2299
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: 890-2299-1
SDG Number: 03D2024024

Login Number: 2299
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/12/22 10:47 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2310-1
Laboratory Sample Delivery Group: 03D2024024
Client Project/Site: MCA 83
Revision: 1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/23/2022 1:00:36 PM

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

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

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

Client: Ensolum
Project/Site: MCA 83

Laboratory Job ID: 890-2310-1
SDG: 03D2024024

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 83

Job ID: 890-2310-1
SDG: 03D2024024

Job ID: 890-2310-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2310-1

REVISION

The report being provided is a revision of the original report sent on 5/18/2022. The report (revision 1) is being revised due to Per client email, requesting chloride re run on sample 11 for chloride.

Report revision history

Receipt
The samples were received on 5/13/2022 1:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-25635 and analytical batch 880-25594 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
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 880-25610 and analytical batch 880-25679 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 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS01
Date Collected: 05/12/22 09:00
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 01:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 01:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 01:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/17/22 01:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 01:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/17/22 01:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*05/16/22 13:04*	*05/17/22 01:26*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/16/22 13:04*	*05/17/22 01:26*	*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			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 15:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 15:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*05/16/22 08:37*	*05/16/22 15:12*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/16/22 08:37*	*05/16/22 15:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**801**		4.98		mg/Kg			05/17/22 22:24	1

Client Sample ID: FS02
Date Collected: 05/12/22 09:05
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 01:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 01:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 01:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 01:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 01:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*05/16/22 13:04*	*05/17/22 01:47*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS02

Date Collected: 05/12/22 09:05
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/16/22 13:04*	*05/17/22 01:47*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/17/22 11:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**50.7**		50.0		mg/Kg			05/17/22 10:03	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		05/16/22 08:37	05/16/22 15:34	1
Diesel Range Organics (Over C10-C28)	**50.7**		50.0		mg/Kg		05/16/22 08:37	05/16/22 15:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/16/22 08:37*	*05/16/22 15:34*	*1*
o-Terphenyl	*102*		*70 - 130*	*05/16/22 08:37*	*05/16/22 15:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**266**		5.04		mg/Kg			05/17/22 22:43	1

Client Sample ID: FS03

Date Collected: 05/12/22 09:10
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/17/22 03:09	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/17/22 03:09	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/17/22 03:09	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/16/22 13:04	05/17/22 03:09	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/16/22 13:04	05/17/22 03:09	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/16/22 13:04	05/17/22 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/16/22 13:04*	*05/17/22 03:09*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/16/22 13:04*	*05/17/22 03:09*	*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			05/17/22 11:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**329**		49.9		mg/Kg			05/17/22 10:03	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS03
Date Collected: 05/12/22 09:10
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 15:55	1
Diesel Range Organics (Over C10-C28)	**329**		49.9		mg/Kg		05/16/22 08:37	05/16/22 15:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/16/22 08:37*	*05/16/22 15:55*	*1*
o-Terphenyl	*5*	*S1-*	*70 - 130*	*05/16/22 08:37*	*05/16/22 15:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**893**		4.99		mg/Kg			05/17/22 22:49	1

Client Sample ID: FS04
Date Collected: 05/12/22 09:15
Date Received: 05/13/22 13:29
Sample Depth: 2 - 3

Lab Sample ID: 890-2310-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 03:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 03:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 03:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 03:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 03:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 03:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 13:04*	*05/17/22 03:29*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 13:04*	*05/17/22 03:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/17/22 11:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**401**		49.9		mg/Kg			05/17/22 10:03	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		05/16/22 08:37	05/16/22 16:17	1
Diesel Range Organics (Over C10-C28)	**401**		49.9		mg/Kg		05/16/22 08:37	05/16/22 16:17	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*05/16/22 08:37*	*05/16/22 16:17*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/16/22 08:37*	*05/16/22 16:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS04
Date Collected: 05/12/22 09:15
Date Received: 05/13/22 13:29
Sample Depth: 2 - 3

Lab Sample ID: 890-2310-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	493		5.00		mg/Kg			05/17/22 22:56	1

Client Sample ID: FS05
Date Collected: 05/12/22 09:20
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 03:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 03:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 03:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/17/22 03:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 03:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/17/22 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/16/22 13:04*	*05/17/22 03:49*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/16/22 13:04*	*05/17/22 03:49*	*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			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 16:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 16:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/16/22 08:37*	*05/16/22 16:59*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/16/22 08:37*	*05/16/22 16:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2690		25.0		mg/Kg			05/17/22 23:02	5

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS06

Date Collected: 05/12/22 09:25
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 04:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 04:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 04:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/16/22 13:04	05/17/22 04:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 04:10	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/16/22 13:04	05/17/22 04:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/16/22 13:04*	*05/17/22 04:10*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 13:04*	*05/17/22 04:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 17:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 17:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/16/22 08:37*	*05/16/22 17:21*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/16/22 08:37*	*05/16/22 17:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**810**		4.95		mg/Kg			05/17/22 23:09	1

Client Sample ID: FS07

Date Collected: 05/12/22 11:55
Date Received: 05/13/22 13:29
Sample Depth: 2 - 3

Lab Sample ID: 890-2310-7
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 04:30	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 04:30	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 04:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 04:30	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 04:30	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 04:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*05/16/22 13:04*	*05/17/22 04:30*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS07

Date Collected: 05/12/22 11:55
Date Received: 05/13/22 13:29
Sample Depth: 2 - 3

Lab Sample ID: 890-2310-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/16/22 13:04*	*05/17/22 04:30*	*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			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 17:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/16/22 08:37	05/16/22 17:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/16/22 08:37	05/16/22 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*05/16/22 08:37*	*05/16/22 17:43*	*1*
o-Terphenyl	*98*		*70 - 130*	*05/16/22 08:37*	*05/16/22 17:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**135**	**F1**	5.01	mg/Kg			05/17/22 23:15	1

Client Sample ID: FS08

Date Collected: 05/12/22 12:00
Date Received: 05/13/22 13:29
Sample Depth: 2 - 3

Lab Sample ID: 890-2310-8
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:04	05/17/22 04:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:04	05/17/22 04:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:04	05/17/22 04:51	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/16/22 13:04	05/17/22 04:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 13:04	05/17/22 04:51	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/16/22 13:04	05/17/22 04:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 13:04*	*05/17/22 04:51*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/16/22 13:04*	*05/17/22 04:51*	*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			05/17/22 11:08	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			05/17/22 10:03	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS08
Date Collected: 05/12/22 12:00
Date Received: 05/13/22 13:29
Sample Depth: 2 - 3

Lab Sample ID: 890-2310-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 18:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 18:05	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/16/22 08:37*	*05/16/22 18:05*	*1*
o-Terphenyl	*115*		*70 - 130*	*05/16/22 08:37*	*05/16/22 18:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.9**		4.99		mg/Kg			05/17/22 23:34	1

Client Sample ID: FS09
Date Collected: 05/12/22 12:05
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-9
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:04	05/17/22 05:11	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:04	05/17/22 05:11	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:04	05/17/22 05:11	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/16/22 13:04	05/17/22 05:11	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:04	05/17/22 05:11	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/16/22 13:04	05/17/22 05:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/16/22 13:04*	*05/17/22 05:11*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/16/22 13:04*	*05/17/22 05:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 18:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 18:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/16/22 08:37*	*05/16/22 18:27*	*1*
o-Terphenyl	*97*		*70 - 130*	*05/16/22 08:37*	*05/16/22 18:27*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS09
Date Collected: 05/12/22 12:05
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-9
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74.3		5.04		mg/Kg			05/17/22 23:40	1

Client Sample ID: FS10
Date Collected: 05/12/22 12:10
Date Received: 05/13/22 13:29
Sample Depth: 2

Lab Sample ID: 890-2310-10
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:04	05/17/22 05:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:04	05/17/22 05:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:04	05/17/22 05:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/22 13:04	05/17/22 05:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/22 13:04	05/17/22 05:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/22 13:04	05/17/22 05:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/16/22 13:04*	*05/17/22 05:31*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/16/22 13:04*	*05/17/22 05:31*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 18:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 18:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/16/22 08:37*	*05/16/22 18:50*	*1*
o-Terphenyl	*96*		*70 - 130*	*05/16/22 08:37*	*05/16/22 18:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.3		4.95		mg/Kg			05/17/22 23:59	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: SW01

Date Collected: 05/12/22 11:30
Date Received: 05/13/22 13:29
Sample Depth: 0 - 3

Lab Sample ID: 890-2310-11
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 05:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 05:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 05:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 05:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:04	05/17/22 05:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:04	05/17/22 05:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/16/22 13:04*	*05/17/22 05:52*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/16/22 13:04*	*05/17/22 05:52*	*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			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 19:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 19:11	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/16/22 08:37*	*05/16/22 19:11*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/16/22 08:37*	*05/16/22 19:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**551**	**F1**	5.04		mg/Kg			05/19/22 13:35	1

Client Sample ID: SW02

Date Collected: 05/12/22 11:35
Date Received: 05/13/22 13:29
Sample Depth: 0 - 3

Lab Sample ID: 890-2310-12
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 06:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 06:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 06:12	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/16/22 13:04	05/17/22 06:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/17/22 06:12	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/16/22 13:04	05/17/22 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/16/22 13:04*	*05/17/22 06:12*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: SW02

Date Collected: 05/12/22 11:35
Date Received: 05/13/22 13:29
Sample Depth: 0 - 3

Lab Sample ID: 890-2310-12
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/16/22 13:04*	*05/17/22 06:12*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 19:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 19:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 19:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*103*		*70 - 130*	*05/16/22 08:37*	*05/16/22 19:33*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/16/22 08:37*	*05/16/22 19:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.5**		4.98		mg/Kg			05/18/22 00:11	1

Client Sample ID: SW03

Date Collected: 05/12/22 11:40
Date Received: 05/13/22 13:29
Sample Depth: 0 - 3

Lab Sample ID: 890-2310-13
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 13:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 13:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 13:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/22 13:18	05/17/22 13:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 13:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/22 13:18	05/17/22 13:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/16/22 13:18*	*05/17/22 13:56*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*05/16/22 13:18*	*05/17/22 13:56*	*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			05/17/22 11:08	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			05/17/22 10:03	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: SW03

Date Collected: 05/12/22 11:40
Date Received: 05/13/22 13:29
Sample Depth: 0 - 3

Lab Sample ID: 890-2310-13

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 19:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 19:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/16/22 08:37	05/16/22 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/16/22 08:37*	*05/16/22 19:55*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/16/22 08:37*	*05/16/22 19:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**398**		4.97		mg/Kg			05/18/22 00:18	1

Client Sample ID: SW04

Date Collected: 05/12/22 11:45
Date Received: 05/13/22 13:29
Sample Depth: 0 - 3

Lab Sample ID: 890-2310-14

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 14:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 14:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 14:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:18	05/17/22 14:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:18	05/17/22 14:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:18	05/17/22 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/16/22 13:18*	*05/17/22 14:22*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*05/16/22 13:18*	*05/17/22 14:22*	*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			05/17/22 11:08	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			05/17/22 10:03	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		05/16/22 08:37	05/16/22 20:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 20:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/16/22 08:37	05/16/22 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*05/16/22 08:37*	*05/16/22 20:17*	*1*
o-Terphenyl	*98*		*70 - 130*	*05/16/22 08:37*	*05/16/22 20:17*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: SW04
Date Collected: 05/12/22 11:45
Date Received: 05/13/22 13:29
Sample Depth: 0 - 3

Lab Sample ID: 890-2310-14
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.6		5.00		mg/Kg			05/18/22 00:24	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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)
890-2298-A-1-H MS	Matrix Spike	102	91
890-2298-A-1-I MSD	Matrix Spike Duplicate	105	97
890-2308-A-1-C MS	Matrix Spike	105	94
890-2308-A-1-D MSD	Matrix Spike Duplicate	106	96
890-2310-1	FS01	113	95
890-2310-2	FS02	112	96
890-2310-3	FS03	117	98
890-2310-4	FS04	110	97
890-2310-5	FS05	111	101
890-2310-6	FS06	108	97
890-2310-7	FS07	118	94
890-2310-8	FS08	110	94
890-2310-9	FS09	117	95
890-2310-10	FS10	116	92
890-2310-11	SW01	108	96
890-2310-12	SW02	111	95
890-2310-13	SW03	99	102
890-2310-14	SW04	109	89
LCS 880-25634/1-A	Lab Control Sample	103	95
LCS 880-25635/1-A	Lab Control Sample	102	91
LCSD 880-25634/2-A	Lab Control Sample Dup	101	94
LCSD 880-25635/2-A	Lab Control Sample Dup	102	99
MB 880-25578/5-A	Method Blank	101	93
MB 880-25602/5-A	Method Blank	79	91
MB 880-25634/5-A	Method Blank	103	92
MB 880-25635/5-A	Method Blank	81	90

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)
890-2303-A-1-C MS	Matrix Spike	94	85
890-2303-A-1-D MSD	Matrix Spike Duplicate	94	85
890-2310-1	FS01	104	103
890-2310-2	FS02	102	102
890-2310-3	FS03	107	5 S1-
890-2310-4	FS04	110	106
890-2310-5	FS05	98	99
890-2310-6	FS06	100	103
890-2310-7	FS07	101	98
890-2310-8	FS08	113	115
890-2310-9	FS09	96	97
890-2310-10	FS10	96	96
890-2310-11	SW01	98	100

Surrogate Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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)
890-2310-12	SW02	103	104
890-2310-13	SW03	96	100
890-2310-14	SW04	97	98
LCS 880-25589/2-A	Lab Control Sample	98	97
LCSD 880-25589/3-A	Lab Control Sample Dup	108	106
MB 880-25589/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25578/5-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25578

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/15/22 16:33	05/16/22 11:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/15/22 16:33*	*05/16/22 11:44*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/15/22 16:33*	*05/16/22 11:44*	*1*

Lab Sample ID: MB 880-25602/5-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25602

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 09:29	05/16/22 14:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*05/16/22 09:29*	*05/16/22 14:48*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/16/22 09:29*	*05/16/22 14:48*	*1*

Lab Sample ID: MB 880-25634/5-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25634

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:04	05/16/22 22:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:04	05/16/22 22:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/16/22 13:04*	*05/16/22 22:21*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/16/22 13:04*	*05/16/22 22:21*	*1*

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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

Lab Sample ID: LCS 880-25634/1-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25634

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09542		mg/Kg		95	70 - 130		
Toluene			0.100	0.1003		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2061		mg/Kg		103	70 - 130		
o-Xylene			0.100	0.1042		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-25634/2-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25634

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08697		mg/Kg		87	70 - 130	9	35
Toluene			0.100	0.09254		mg/Kg		93	70 - 130	8	35
Ethylbenzene			0.100	0.09409		mg/Kg		94	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1904		mg/Kg		95	70 - 130	8	35
o-Xylene			0.100	0.09588		mg/Kg		96	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-2308-A-1-C MS
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25634

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.101	0.07755		mg/Kg		77	70 - 130		
Toluene	<0.00199	U	0.101	0.08392		mg/Kg		83	70 - 130		
Ethylbenzene	<0.00199	U	0.101	0.08638		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1758		mg/Kg		87	70 - 130		
o-Xylene	<0.00199	U	0.101	0.08967		mg/Kg		89	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-2308-A-1-D MSD
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25634

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.08053		mg/Kg		80	70 - 130	4	35
Toluene	<0.00199	U	0.100	0.08566		mg/Kg		85	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.100	0.08559		mg/Kg		85	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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

Lab Sample ID: 890-2308-A-1-D MSD
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25634

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1783		mg/Kg		89	70 - 130	1	35
o-Xylene	<0.00199	U	0.100	0.09019		mg/Kg		90	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: MB 880-25635/5-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25635

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:18	05/17/22 04:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:18	05/17/22 04:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*05/16/22 13:18*	*05/17/22 04:14*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/16/22 13:18*	*05/17/22 04:14*	*1*

Lab Sample ID: LCS 880-25635/1-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25635

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09113		mg/Kg		91	70 - 130		
Toluene			0.100	0.09419		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.09152		mg/Kg		92	70 - 130		
m-Xylene & p-Xylene			0.200	0.1841		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09210		mg/Kg		92	70 - 130		

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

Lab Sample ID: LCSD 880-25635/2-A
Matrix: Solid
Analysis Batch: 25594

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25635

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09243		mg/Kg		92	70 - 130	1	35
Toluene			0.100	0.09593		mg/Kg		96	70 - 130	2	35
Ethylbenzene			0.100	0.09455		mg/Kg		95	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1917		mg/Kg		96	70 - 130	4	35
o-Xylene			0.100	0.09558		mg/Kg		96	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 890-2298-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25594 — **Prep Batch: 25635**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F1	0.100	0.03705	F1	mg/Kg		37	70 - 130
Toluene	<0.00202	U F1	0.100	0.04088	F1	mg/Kg		41	70 - 130
Ethylbenzene	<0.00202	U F1	0.100	0.04240	F1	mg/Kg		42	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.200	0.08535	F1	mg/Kg		43	70 - 130
o-Xylene	<0.00202	U F1	0.100	0.04443	F1	mg/Kg		44	70 - 130

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

Lab Sample ID: 890-2298-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25594 — **Prep Batch: 25635**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0996	0.04559	F1	mg/Kg		46	70 - 130	21	35
Toluene	<0.00202	U F1	0.0996	0.04983	F1	mg/Kg		50	70 - 130	20	35
Ethylbenzene	<0.00202	U F1	0.0996	0.05013	F1	mg/Kg		50	70 - 130	17	35
m-Xylene & p-Xylene	<0.00403	U F1	0.199	0.1019	F1	mg/Kg		51	70 - 130	18	35
o-Xylene	<0.00202	U F1	0.0996	0.05180	F1	mg/Kg		52	70 - 130	15	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

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

Lab Sample ID: MB 880-25589/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25584 — **Prep Batch: 25589**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/16/22 08:37	05/16/22 11:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/16/22 08:37	05/16/22 11:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/16/22 08:37	05/16/22 11:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	05/16/22 08:37	05/16/22 11:16	1
o-Terphenyl	97		70 - 130	05/16/22 08:37	05/16/22 11:16	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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

Lab Sample ID: LCS 880-25589/2-A
Matrix: Solid
Analysis Batch: 25584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25589

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	860.9		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	928.2		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: LCSD 880-25589/3-A
Matrix: Solid
Analysis Batch: 25584

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25589

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	969.2		mg/Kg		97	70 - 130	12	20
Diesel Range Organics (Over C10-C28)			1000	1020		mg/Kg		102	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: 890-2303-A-1-C MS
Matrix: Solid
Analysis Batch: 25584

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25589

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	912.0		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1022		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 890-2303-A-1-D MSD
Matrix: Solid
Analysis Batch: 25584

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25589

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	928.3		mg/Kg		90	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1022		mg/Kg		102	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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

Lab Sample ID: 890-2303-A-1-D MSD
Matrix: Solid
Analysis Batch: 25584

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25589

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	85		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25610/1-A
Matrix: Solid
Analysis Batch: 25679

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/17/22 21:27	1

Lab Sample ID: LCS 880-25610/2-A
Matrix: Solid
Analysis Batch: 25679

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	274.3		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-25610/3-A
Matrix: Solid
Analysis Batch: 25679

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	260.6		mg/Kg		104	90 - 110	5	20

Lab Sample ID: 890-2310-7 MS
Matrix: Solid
Analysis Batch: 25679

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	135	F1	251	442.1	F1	mg/Kg		123	90 - 110		

Lab Sample ID: 890-2310-7 MSD
Matrix: Solid
Analysis Batch: 25679

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	135	F1	251	442.2	F1	mg/Kg		123	90 - 110	0	20

Lab Sample ID: MB 880-25897/1-A
Matrix: Solid
Analysis Batch: 25898

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/19/22 13:15	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-25897/2-A
Matrix: Solid
Analysis Batch: 25898

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	261.4		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-25897/3-A
Matrix: Solid
Analysis Batch: 25898

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	258.5		mg/Kg		103	90 - 110	1	20

Lab Sample ID: 890-2310-11 MS
Matrix: Solid
Analysis Batch: 25898

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	651	F1	252	870.8	F1	mg/Kg		87	90 - 110		

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

GC VOA

Prep Batch: 25578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25578/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 25591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Total/NA	Solid	8021B	25634
890-2310-2	FS02	Total/NA	Solid	8021B	25634
890-2310-3	FS03	Total/NA	Solid	8021B	25634
890-2310-4	FS04	Total/NA	Solid	8021B	25634
890-2310-5	FS05	Total/NA	Solid	8021B	25634
890-2310-6	FS06	Total/NA	Solid	8021B	25634
890-2310-7	FS07	Total/NA	Solid	8021B	25634
890-2310-8	FS08	Total/NA	Solid	8021B	25634
890-2310-9	FS09	Total/NA	Solid	8021B	25634
890-2310-10	FS10	Total/NA	Solid	8021B	25634
890-2310-11	SW01	Total/NA	Solid	8021B	25634
890-2310-12	SW02	Total/NA	Solid	8021B	25634
MB 880-25578/5-A	Method Blank	Total/NA	Solid	8021B	25578
MB 880-25634/5-A	Method Blank	Total/NA	Solid	8021B	25634
LCS 880-25634/1-A	Lab Control Sample	Total/NA	Solid	8021B	25634
LCSD 880-25634/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25634
890-2308-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	25634
890-2308-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25634

Analysis Batch: 25594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-13	SW03	Total/NA	Solid	8021B	25635
890-2310-14	SW04	Total/NA	Solid	8021B	25635
MB 880-25602/5-A	Method Blank	Total/NA	Solid	8021B	25602
MB 880-25635/5-A	Method Blank	Total/NA	Solid	8021B	25635
LCS 880-25635/1-A	Lab Control Sample	Total/NA	Solid	8021B	25635
LCSD 880-25635/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25635
890-2298-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	25635
890-2298-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25635

Prep Batch: 25602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25602/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 25634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Total/NA	Solid	5035	
890-2310-2	FS02	Total/NA	Solid	5035	
890-2310-3	FS03	Total/NA	Solid	5035	
890-2310-4	FS04	Total/NA	Solid	5035	
890-2310-5	FS05	Total/NA	Solid	5035	
890-2310-6	FS06	Total/NA	Solid	5035	
890-2310-7	FS07	Total/NA	Solid	5035	
890-2310-8	FS08	Total/NA	Solid	5035	
890-2310-9	FS09	Total/NA	Solid	5035	
890-2310-10	FS10	Total/NA	Solid	5035	
890-2310-11	SW01	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

GC VOA (Continued)

Prep Batch: 25634 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-12	SW02	Total/NA	Solid	5035	
MB 880-25634/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25634/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25634/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2308-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2308-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 25635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-13	SW03	Total/NA	Solid	5035	
890-2310-14	SW04	Total/NA	Solid	5035	
MB 880-25635/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25635/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25635/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2298-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
890-2298-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 25709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Total/NA	Solid	Total BTEX	
890-2310-2	FS02	Total/NA	Solid	Total BTEX	
890-2310-3	FS03	Total/NA	Solid	Total BTEX	
890-2310-4	FS04	Total/NA	Solid	Total BTEX	
890-2310-5	FS05	Total/NA	Solid	Total BTEX	
890-2310-6	FS06	Total/NA	Solid	Total BTEX	
890-2310-7	FS07	Total/NA	Solid	Total BTEX	
890-2310-8	FS08	Total/NA	Solid	Total BTEX	
890-2310-9	FS09	Total/NA	Solid	Total BTEX	
890-2310-10	FS10	Total/NA	Solid	Total BTEX	
890-2310-11	SW01	Total/NA	Solid	Total BTEX	
890-2310-12	SW02	Total/NA	Solid	Total BTEX	
890-2310-13	SW03	Total/NA	Solid	Total BTEX	
890-2310-14	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 25584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Total/NA	Solid	8015B NM	25589
890-2310-2	FS02	Total/NA	Solid	8015B NM	25589
890-2310-3	FS03	Total/NA	Solid	8015B NM	25589
890-2310-4	FS04	Total/NA	Solid	8015B NM	25589
890-2310-5	FS05	Total/NA	Solid	8015B NM	25589
890-2310-6	FS06	Total/NA	Solid	8015B NM	25589
890-2310-7	FS07	Total/NA	Solid	8015B NM	25589
890-2310-8	FS08	Total/NA	Solid	8015B NM	25589
890-2310-9	FS09	Total/NA	Solid	8015B NM	25589
890-2310-10	FS10	Total/NA	Solid	8015B NM	25589
890-2310-11	SW01	Total/NA	Solid	8015B NM	25589
890-2310-12	SW02	Total/NA	Solid	8015B NM	25589
890-2310-13	SW03	Total/NA	Solid	8015B NM	25589

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

GC Semi VOA (Continued)

Analysis Batch: 25584 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-14	SW04	Total/NA	Solid	8015B NM	25589
MB 880-25589/1-A	Method Blank	Total/NA	Solid	8015B NM	25589
LCS 880-25589/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25589
LCSD 880-25589/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25589
890-2303-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	25589
890-2303-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25589

Prep Batch: 25589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Total/NA	Solid	8015NM Prep	
890-2310-2	FS02	Total/NA	Solid	8015NM Prep	
890-2310-3	FS03	Total/NA	Solid	8015NM Prep	
890-2310-4	FS04	Total/NA	Solid	8015NM Prep	
890-2310-5	FS05	Total/NA	Solid	8015NM Prep	
890-2310-6	FS06	Total/NA	Solid	8015NM Prep	
890-2310-7	FS07	Total/NA	Solid	8015NM Prep	
890-2310-8	FS08	Total/NA	Solid	8015NM Prep	
890-2310-9	FS09	Total/NA	Solid	8015NM Prep	
890-2310-10	FS10	Total/NA	Solid	8015NM Prep	
890-2310-11	SW01	Total/NA	Solid	8015NM Prep	
890-2310-12	SW02	Total/NA	Solid	8015NM Prep	
890-2310-13	SW03	Total/NA	Solid	8015NM Prep	
890-2310-14	SW04	Total/NA	Solid	8015NM Prep	
MB 880-25589/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25589/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25589/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2303-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2303-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Total/NA	Solid	8015 NM	
890-2310-2	FS02	Total/NA	Solid	8015 NM	
890-2310-3	FS03	Total/NA	Solid	8015 NM	
890-2310-4	FS04	Total/NA	Solid	8015 NM	
890-2310-5	FS05	Total/NA	Solid	8015 NM	
890-2310-6	FS06	Total/NA	Solid	8015 NM	
890-2310-7	FS07	Total/NA	Solid	8015 NM	
890-2310-8	FS08	Total/NA	Solid	8015 NM	
890-2310-9	FS09	Total/NA	Solid	8015 NM	
890-2310-10	FS10	Total/NA	Solid	8015 NM	
890-2310-11	SW01	Total/NA	Solid	8015 NM	
890-2310-12	SW02	Total/NA	Solid	8015 NM	
890-2310-13	SW03	Total/NA	Solid	8015 NM	
890-2310-14	SW04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 25610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

HPLC/IC (Continued)

Leach Batch: 25610 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-2	FS02	Soluble	Solid	DI Leach	
890-2310-3	FS03	Soluble	Solid	DI Leach	
890-2310-4	FS04	Soluble	Solid	DI Leach	
890-2310-5	FS05	Soluble	Solid	DI Leach	
890-2310-6	FS06	Soluble	Solid	DI Leach	
890-2310-7	FS07	Soluble	Solid	DI Leach	
890-2310-8	FS08	Soluble	Solid	DI Leach	
890-2310-9	FS09	Soluble	Solid	DI Leach	
890-2310-10	FS10	Soluble	Solid	DI Leach	
890-2310-12	SW02	Soluble	Solid	DI Leach	
890-2310-13	SW03	Soluble	Solid	DI Leach	
890-2310-14	SW04	Soluble	Solid	DI Leach	
MB 880-25610/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25610/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25610/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2310-7 MS	FS07	Soluble	Solid	DI Leach	
890-2310-7 MSD	FS07	Soluble	Solid	DI Leach	

Analysis Batch: 25679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-1	FS01	Soluble	Solid	300.0	25610
890-2310-2	FS02	Soluble	Solid	300.0	25610
890-2310-3	FS03	Soluble	Solid	300.0	25610
890-2310-4	FS04	Soluble	Solid	300.0	25610
890-2310-5	FS05	Soluble	Solid	300.0	25610
890-2310-6	FS06	Soluble	Solid	300.0	25610
890-2310-7	FS07	Soluble	Solid	300.0	25610
890-2310-8	FS08	Soluble	Solid	300.0	25610
890-2310-9	FS09	Soluble	Solid	300.0	25610
890-2310-10	FS10	Soluble	Solid	300.0	25610
890-2310-12	SW02	Soluble	Solid	300.0	25610
890-2310-13	SW03	Soluble	Solid	300.0	25610
890-2310-14	SW04	Soluble	Solid	300.0	25610
MB 880-25610/1-A	Method Blank	Soluble	Solid	300.0	25610
LCS 880-25610/2-A	Lab Control Sample	Soluble	Solid	300.0	25610
LCSD 880-25610/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25610
890-2310-7 MS	FS07	Soluble	Solid	300.0	25610
890-2310-7 MSD	FS07	Soluble	Solid	300.0	25610

Leach Batch: 25897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-11	SW01	Soluble	Solid	DI Leach	
MB 880-25897/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25897/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25897/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2310-11 MS	SW01	Soluble	Solid	DI Leach	
890-2310-11 MSD	SW01	Soluble	Solid	DI Leach	

Analysis Batch: 25898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2310-11	SW01	Soluble	Solid	300.0	25897

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

HPLC/IC (Continued)

Analysis Batch: 25898 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25897/1-A	Method Blank	Soluble	Solid	300.0	25897
LCS 880-25897/2-A	Lab Control Sample	Soluble	Solid	300.0	25897
LCSD 880-25897/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25897
890-2310-11 MS	SW01	Soluble	Solid	300.0	25897
890-2310-11 MSD	SW01	Soluble	Solid	300.0	25897

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS01
Date Collected: 05/12/22 09:00
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-1
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			5.00 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 01:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 15:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 22:24	CH	XEN MID

Client Sample ID: FS02
Date Collected: 05/12/22 09:05
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-2
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	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 01:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 15:34	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 22:43	CH	XEN MID

Client Sample ID: FS03
Date Collected: 05/12/22 09:10
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-3
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			5.04 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 03:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 15:55	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 22:49	CH	XEN MID

Client Sample ID: FS04
Date Collected: 05/12/22 09:15
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 03:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS04
Date Collected: 05/12/22 09:15
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-4
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			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 16:17	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 22:56	CH	XEN MID

Client Sample ID: FS05
Date Collected: 05/12/22 09:20
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 03:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 16:59	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		5			25679	05/17/22 23:02	CH	XEN MID

Client Sample ID: FS06
Date Collected: 05/12/22 09:25
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 04:10	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 17:21	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 23:09	CH	XEN MID

Client Sample ID: FS07
Date Collected: 05/12/22 11:55
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-7
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			5.03 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 04:30	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 17:43	AJ	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: FS07
Date Collected: 05/12/22 11:55
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-7
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			4.99 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 23:15	CH	XEN MID

Client Sample ID: FS08
Date Collected: 05/12/22 12:00
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-8
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			5.01 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 04:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 18:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 23:34	CH	XEN MID

Client Sample ID: FS09
Date Collected: 05/12/22 12:05
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-9
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			4.95 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 05:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 18:27	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 23:40	CH	XEN MID

Client Sample ID: FS10
Date Collected: 05/12/22 12:10
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-10
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			4.97 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 05:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 18:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/17/22 23:59	CH	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: SW01
Date Collected: 05/12/22 11:30
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-11
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			5.02 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 05:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 19:11	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25897	05/19/22 12:20	CH	XEN MID
Soluble	Analysis	300.0		1			25898	05/19/22 13:35	CH	XEN MID

Client Sample ID: SW02
Date Collected: 05/12/22 11:35
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-12
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			4.99 g	5 mL	25634	05/16/22 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1			25591	05/17/22 06:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 19:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/18/22 00:11	CH	XEN MID

Client Sample ID: SW03
Date Collected: 05/12/22 11:40
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-13
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			5.01 g	5 mL	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 13:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 19:55	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/18/22 00:18	CH	XEN MID

Client Sample ID: SW04
Date Collected: 05/12/22 11:45
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-14
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	25635	05/16/22 13:18	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 14:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25709	05/17/22 11:08	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Client Sample ID: SW04
Date Collected: 05/12/22 11:45
Date Received: 05/13/22 13:29

Lab Sample ID: 890-2310-14
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			25688	05/17/22 10:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25589	05/16/22 08:37	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25584	05/16/22 20:17	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25610	05/16/22 10:43	CH	XEN MID
Soluble	Analysis	300.0		1			25679	05/18/22 00:24	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

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	T104704400-21-22	06-30-22

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 83

Job ID: 890-2310-1
SDG: 03D2024024

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2310-1
SDG: 03D2024024

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2310-1	FS01	Solid	05/12/22 09:00	05/13/22 13:29	2
890-2310-2	FS02	Solid	05/12/22 09:05	05/13/22 13:29	2
890-2310-3	FS03	Solid	05/12/22 09:10	05/13/22 13:29	2
890-2310-4	FS04	Solid	05/12/22 09:15	05/13/22 13:29	2 - 3
890-2310-5	FS05	Solid	05/12/22 09:20	05/13/22 13:29	2
890-2310-6	FS06	Solid	05/12/22 09:25	05/13/22 13:29	2
890-2310-7	FS07	Solid	05/12/22 11:55	05/13/22 13:29	2 - 3
890-2310-8	FS08	Solid	05/12/22 12:00	05/13/22 13:29	2 - 3
890-2310-9	FS09	Solid	05/12/22 12:05	05/13/22 13:29	2
890-2310-10	FS10	Solid	05/12/22 12:10	05/13/22 13:29	2
890-2310-11	SW01	Solid	05/12/22 11:30	05/13/22 13:29	0 - 3
890-2310-12	SW02	Solid	05/12/22 11:35	05/13/22 13:29	0 - 3
890-2310-13	SW03	Solid	05/12/22 11:40	05/13/22 13:29	0 - 3
890-2310-14	SW04	Solid	05/12/22 11:45	05/13/22 13:29	0 - 3

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	705 W Wadley Ave. Suite 240	Address:	705 W Wadley Ave. Suite 240
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, TX 79705
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 83	Turn Around	
Project Number:	03D2024024	☑ Routine ☐ Rush	
Project Location:	Rural Lea	Due Date:	5 day TAT
Sampler's Name:	Gilbert Moreno	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:	T-NM-017	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.8	
Total Containers:		Corrected Temperature:	5.6	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01	S	5.12.22	9:00	2'	Comp	1		X	X	X
FS02	S	5.12.22	9:05	2'	Comp	1		X	X	X
FS03	S	5.12.22	9:10	2'	Comp	1		X	X	X
FS04	S	5.12.22	9:15	2-3'	Comp	1		X	X	X
FS05	S	5.12.22	9:20	2'	Comp	1		X	X	X
FS06	S	5.12.22	9:25	2'	Comp	1		X	X	X
FS07	S	5.12.22	11:55	2-3'	Comp	1		X	X	X
FS08	S	5.12.22	12:00	2-3'	Comp	1		X	X	X
FS09	S	5.12.22	12:05	2'	Comp	1		X	X	X
FS10	S	5.12.22	12:10	2'	Comp	1		X	X	X

890-2310 Chain of Custody

Preservative Codes

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

Sample Comments

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/13/22 1:29	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	705 W Wadley Ave. Suite 240	Address:	705 W Wadley Ave. Suite 240
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, TX 79705
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 83	Turn Around	
Project Number:	03D2024024	☑ Routine ☐ Rush	
Project Location:	Rural Lea	Due Date:	5 day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SW01	S	5.12.22	11:30	0-3'	Comp	1		X	X	X	
SW02	S	5.12.22	11:35	0-3'	Comp	1		X	X	X	
SW03	S	5.12.22	11:40	0-3'	Comp	1		X	X	X	
SW04	S	5.12.22	11:45	0-3'	Comp	1		X	X	X	

5.12.22

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

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		5/13/22 1:29	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2310-1
SDG Number: 03D2024024

Login Number: 2310
List Number: 1
Creator: Olivas, Nathaniel

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: 890-2310-1
SDG Number: 03D2024024

Login Number: 2310
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/16/22 09:25 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: 890-2312-1
Laboratory Sample Delivery Group: 03D2024024
Client Project/Site: MCA 83

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/20/2022 11:12:53 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 83

Laboratory Job ID: 890-2312-1
SDG: 03D2024024

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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 83

Job ID: 890-2312-1
SDG: 03D2024024

Job ID: 890-2312-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2312-1

Receipt
The samples were received on 5/13/2022 2:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-25650 and analytical batch 880-25671 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
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 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: FS11

Date Collected: 05/12/22 10:00
Date Received: 05/13/22 14:55
Sample Depth: 2

Lab Sample ID: 890-2312-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 00:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 00:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 00:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 15:47	05/18/22 00:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 00:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 15:47	05/18/22 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/16/22 15:47*	*05/18/22 00:37*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 15:47*	*05/18/22 00:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/18/22 09:14	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			05/17/22 16:30	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		05/17/22 13:00	05/17/22 15:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/22 13:00	05/17/22 15:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/22 13:00	05/17/22 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/17/22 13:00*	*05/17/22 15:09*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/17/22 13:00*	*05/17/22 15:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.8**		4.99		mg/Kg			05/18/22 17:38	1

Client Sample ID: FS12

Date Collected: 05/12/22 10:05
Date Received: 05/13/22 14:55
Sample Depth: 2

Lab Sample ID: 890-2312-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 00:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 00:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 00:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/22 15:47	05/18/22 00:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 00:58	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/22 15:47	05/18/22 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/16/22 15:47*	*05/18/22 00:58*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: FS12

Date Collected: 05/12/22 10:05
Date Received: 05/13/22 14:55
Sample Depth: 2

Lab Sample ID: 890-2312-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 15:47*	*05/18/22 00:58*	*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			05/18/22 09:14	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			05/17/22 16:30	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		05/17/22 13:00	05/17/22 15:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/17/22 13:00	05/17/22 15:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/17/22 13:00	05/17/22 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/17/22 13:00*	*05/17/22 15:31*	*1*
o-Terphenyl	*115*		*70 - 130*	*05/17/22 13:00*	*05/17/22 15:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.0**		4.98	mg/Kg			05/18/22 18:06	1

Client Sample ID: FS13

Date Collected: 05/12/22 10:10
Date Received: 05/13/22 14:55
Sample Depth: 2

Lab Sample ID: 890-2312-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 15:47	05/18/22 01:18	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/16/22 15:47	05/18/22 01:18	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/16/22 15:47	05/18/22 01:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 15:47	05/18/22 01:18	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/16/22 15:47	05/18/22 01:18	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 15:47	05/18/22 01:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/16/22 15:47*	*05/18/22 01:18*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/16/22 15:47*	*05/18/22 01:18*	*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			05/18/22 09:14	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			05/17/22 16:30	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: FS13

Lab Sample ID: 890-2312-3
Matrix: Solid
Date Collected: 05/12/22 10:10
Date Received: 05/13/22 14:55
Sample Depth: 2

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		05/18/22 15:06	05/19/22 00:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 00:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/18/22 15:06*	*05/19/22 00:58*	*1*
o-Terphenyl	*108*		*70 - 130*	*05/18/22 15:06*	*05/19/22 00:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.04	U	5.04		mg/Kg			05/18/22 18:15	1

Client Sample ID: FS14

Lab Sample ID: 890-2312-4
Matrix: Solid
Date Collected: 05/12/22 10:15
Date Received: 05/13/22 14:55
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 15:47	05/18/22 01:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 15:47	05/18/22 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/16/22 15:47*	*05/18/22 01:39*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/16/22 15:47*	*05/18/22 01:39*	*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			05/18/22 09:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/22 16:30	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		05/18/22 15:06	05/19/22 01:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/19/22 01:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/19/22 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/18/22 15:06*	*05/19/22 01:19*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/18/22 15:06*	*05/19/22 01:19*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: FS14

Lab Sample ID: 890-2312-4
Matrix: Solid
Date Collected: 05/12/22 10:15
Date Received: 05/13/22 14:55
Sample Depth: 2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.58		4.98		mg/Kg			05/18/22 18:25	1

Client Sample ID: FS15

Lab Sample ID: 890-2312-5
Matrix: Solid
Date Collected: 05/12/22 10:20
Date Received: 05/13/22 14:55
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 15:47	05/18/22 01:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:47	05/18/22 01:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 15:47	05/18/22 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/16/22 15:47*	*05/18/22 01:59*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 15:47*	*05/18/22 01:59*	*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			05/18/22 09:14	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			05/17/22 16:30	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		05/17/22 13:00	05/17/22 16:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/22 13:00	05/17/22 16:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/22 13:00	05/17/22 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/17/22 13:00*	*05/17/22 16:57*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/17/22 13:00*	*05/17/22 16:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	115		5.01		mg/Kg			05/18/22 18:34	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: SW05

Date Collected: 05/12/22 10:25
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

Lab Sample ID: 890-2312-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/22 15:47	05/18/22 02:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:20	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/22 15:47	05/18/22 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/16/22 15:47*	*05/18/22 02:20*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 15:47*	*05/18/22 02:20*	*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			05/18/22 09:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/22 16:30	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		05/17/22 13:00	05/17/22 17:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/22 13:00	05/17/22 17:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/22 13:00	05/17/22 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/17/22 13:00*	*05/17/22 17:19*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/17/22 13:00*	*05/17/22 17:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.8**		4.99		mg/Kg			05/18/22 18:43	1

Client Sample ID: SW06

Date Collected: 05/12/22 10:30
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

Lab Sample ID: 890-2312-7
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 15:47	05/18/22 02:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 02:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 15:47	05/18/22 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/16/22 15:47*	*05/18/22 02:41*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: SW06

Lab Sample ID: 890-2312-7
Matrix: Solid
Date Collected: 05/12/22 10:30
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/16/22 15:47*	*05/18/22 02:41*	*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			05/18/22 09:14	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			05/17/22 16:30	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		05/17/22 13:00	05/17/22 17:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/17/22 13:00	05/17/22 17:41	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/17/22 13:00	05/17/22 17:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*05/17/22 13:00*	*05/17/22 17:41*	*1*
o-Terphenyl	*119*		*70 - 130*	*05/17/22 13:00*	*05/17/22 17:41*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.22**		4.97	mg/Kg			05/18/22 18:52	1

Client Sample ID: SW07

Lab Sample ID: 890-2312-8
Matrix: Solid
Date Collected: 05/12/22 10:35
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 15:47	05/18/22 04:04	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 15:47	05/18/22 04:04	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 15:47	05/18/22 04:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 15:47	05/18/22 04:04	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 15:47	05/18/22 04:04	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 15:47	05/18/22 04:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/16/22 15:47*	*05/18/22 04:04*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 15:47*	*05/18/22 04:04*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/18/22 09:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/17/22 16:30	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: SW07

Lab Sample ID: 890-2312-8
Matrix: Solid
Date Collected: 05/12/22 10:35
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

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		05/17/22 13:00	05/17/22 18:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/22 13:00	05/17/22 18:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/22 13:00	05/17/22 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*05/17/22 13:00*	*05/17/22 18:03*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/17/22 13:00*	*05/17/22 18:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.13**		5.00		mg/Kg			05/18/22 19:01	1

Client Sample ID: SW08

Lab Sample ID: 890-2312-9
Matrix: Solid
Date Collected: 05/12/22 10:40
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/16/22 15:47	05/18/22 04:24	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/16/22 15:47	05/18/22 04:24	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/16/22 15:47	05/18/22 04:24	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/16/22 15:47	05/18/22 04:24	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/16/22 15:47	05/18/22 04:24	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/16/22 15:47	05/18/22 04:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/16/22 15:47*	*05/18/22 04:24*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/16/22 15:47*	*05/18/22 04:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/18/22 09:14	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			05/17/22 16:30	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		05/17/22 13:00	05/17/22 18:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/22 13:00	05/17/22 18:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/22 13:00	05/17/22 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/17/22 13:00*	*05/17/22 18:25*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/17/22 13:00*	*05/17/22 18:25*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: SW08

Lab Sample ID: 890-2312-9
Matrix: Solid
Date Collected: 05/12/22 10:40
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.75		4.98		mg/Kg			05/19/22 05:19	1

Client Sample ID: SW09

Lab Sample ID: 890-2312-10
Matrix: Solid
Date Collected: 05/12/22 10:45
Date Received: 05/13/22 14:55
Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 04:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 04:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 04:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/16/22 15:47	05/18/22 04:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/18/22 04:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/16/22 15:47	05/18/22 04:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/16/22 15:47*	*05/18/22 04:45*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/16/22 15:47*	*05/18/22 04:45*	*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			05/18/22 09:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/17/22 16:30	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		05/17/22 13:00	05/17/22 18:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/22 13:00	05/17/22 18:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/22 13:00	05/17/22 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*05/17/22 13:00*	*05/17/22 18:47*	*1*
o-Terphenyl	*126*		*70 - 130*	*05/17/22 13:00*	*05/17/22 18:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.15		4.95		mg/Kg			05/19/22 05:28	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

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)
890-2311-A-10-G MS	Matrix Spike	102	92
890-2311-A-10-H MSD	Matrix Spike Duplicate	107	97
890-2312-1	FS11	109	97
890-2312-2	FS12	106	97
890-2312-3	FS13	108	96
890-2312-4	FS14	107	94
890-2312-5	FS15	106	97
890-2312-6	SW05	111	97
890-2312-7	SW06	110	94
890-2312-8	SW07	109	97
890-2312-9	SW08	108	99
890-2312-10	SW09	106	97
LCS 880-25650/1-A	Lab Control Sample	101	98
LCSD 880-25650/2-A	Lab Control Sample Dup	100	97
MB 880-25638/5-A	Method Blank	102	92
MB 880-25650/5-A	Method Blank	103	92

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-14809-A-1-C MS	Matrix Spike	101	92
880-14809-A-1-D MSD	Matrix Spike Duplicate	100	93
890-2312-1	FS11	108	107
890-2312-2	FS12	113	115
890-2312-3	FS13	106	108
890-2312-4	FS14	109	114
890-2312-5	FS15	106	106
890-2312-6	SW05	103	103
890-2312-7	SW06	122	119
890-2312-8	SW07	104	104
890-2312-9	SW08	103	104
890-2312-10	SW09	125	126
890-2316-A-1-G MS	Matrix Spike	104	98
890-2316-A-1-H MSD	Matrix Spike Duplicate	103	94
LCS 880-25667/2-A	Lab Control Sample	106	104
LCS 880-25829/2-A	Lab Control Sample	105	102
LCSD 880-25667/3-A	Lab Control Sample Dup	106	105
LCSD 880-25829/3-A	Lab Control Sample Dup	102	98
MB 880-25667/1-A	Method Blank	107	108
MB 880-25829/1-A	Method Blank	111	118

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25638/5-A
Matrix: Solid
Analysis Batch: 25671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25638

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:46	05/17/22 12:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/16/22 13:46*	*05/17/22 12:34*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/16/22 13:46*	*05/17/22 12:34*	*1*

Lab Sample ID: MB 880-25650/5-A
Matrix: Solid
Analysis Batch: 25671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25650

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/17/22 23:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/17/22 23:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/17/22 23:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 15:47	05/17/22 23:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:47	05/17/22 23:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 15:47	05/17/22 23:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/16/22 15:47*	*05/17/22 23:14*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/16/22 15:47*	*05/17/22 23:14*	*1*

Lab Sample ID: LCS 880-25650/1-A
Matrix: Solid
Analysis Batch: 25671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25650

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09107		mg/Kg		91	70 - 130		
Toluene			0.100	0.09370		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.09393		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1875		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09558		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-25650/2-A
Matrix: Solid
Analysis Batch: 25671

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25650

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08989		mg/Kg		90	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

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

Lab Sample ID: LCSD 880-25650/2-A
Matrix: Solid
Analysis Batch: 25671

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25650

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09176		mg/Kg		92	70 - 130	2	35
Ethylbenzene			0.100	0.09217		mg/Kg		92	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1838		mg/Kg		92	70 - 130	2	35
o-Xylene			0.100	0.09342		mg/Kg		93	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-2311-A-10-G MS
Matrix: Solid
Analysis Batch: 25671

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25650

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1 F2	0.101	0.03338	F1	mg/Kg		33	70 - 130
Toluene	<0.00201	U F1 F2	0.101	0.03913	F1	mg/Kg		39	70 - 130
Ethylbenzene	<0.00201	U F1 F2	0.101	0.04233	F1	mg/Kg		42	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.202	0.08890	F1	mg/Kg		44	70 - 130
o-Xylene	<0.00201	U F1 F2	0.101	0.04765	F1	mg/Kg		47	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-2311-A-10-H MSD
Matrix: Solid
Analysis Batch: 25671

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25650

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1 F2	0.0998	0.06906	F1 F2	mg/Kg		69	70 - 130	70	35
Toluene	<0.00201	U F1 F2	0.0998	0.07275	F2	mg/Kg		73	70 - 130	60	35
Ethylbenzene	<0.00201	U F1 F2	0.0998	0.07396	F2	mg/Kg		74	70 - 130	54	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.1482	F2	mg/Kg		74	70 - 130	50	35
o-Xylene	<0.00201	U F1 F2	0.0998	0.07416	F2	mg/Kg		74	70 - 130	44	35

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

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

Lab Sample ID: MB 880-25667/1-A
Matrix: Solid
Analysis Batch: 25669

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25667

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/17/22 08:22	05/17/22 10:19	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

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

Lab Sample ID: MB 880-25667/1-A
Matrix: Solid
Analysis Batch: 25669

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25667

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/22 08:22	05/17/22 10:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/22 08:22	05/17/22 10:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/17/22 08:22*	*05/17/22 10:19*	*1*
o-Terphenyl	*108*		*70 - 130*	*05/17/22 08:22*	*05/17/22 10:19*	*1*

Lab Sample ID: LCS 880-25667/2-A
Matrix: Solid
Analysis Batch: 25669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25667

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	893.2		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	997.7		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: LCSD 880-25667/3-A
Matrix: Solid
Analysis Batch: 25669

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25667

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	891.7		mg/Kg		89	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	991.7		mg/Kg		99	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: 880-14809-A-1-C MS
Matrix: Solid
Analysis Batch: 25669

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25667

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	937.1		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1000		mg/Kg		100	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

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

Lab Sample ID: 880-14809-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25669 — **Prep Batch: 25667**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	919.8		mg/Kg		88	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	999.6		mg/Kg		100	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: MB 880-25829/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25770 — **Prep Batch: 25829**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/18/22 21:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/18/22 21:27	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/18/22 21:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/18/22 15:06*	*05/18/22 21:27*	*1*
o-Terphenyl	*118*		*70 - 130*	*05/18/22 15:06*	*05/18/22 21:27*	*1*

Lab Sample ID: LCS 880-25829/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25770 — **Prep Batch: 25829**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	857.6		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	998.7		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: LCSD 880-25829/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25770 — **Prep Batch: 25829**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	845.8		mg/Kg		85	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	959.5		mg/Kg		96	70 - 130	4	20

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

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

Lab Sample ID: LCSD 880-25829/3-A
Matrix: Solid
Analysis Batch: 25770

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25829

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: 890-2316-A-1-G MS
Matrix: Solid
Analysis Batch: 25770

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25829

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1156		mg/Kg		113	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	1405	F1	mg/Kg		141	70 - 130

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

Lab Sample ID: 890-2316-A-1-H MSD
Matrix: Solid
Analysis Batch: 25770

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25829

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	1218		mg/Kg		119	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	1377	F1	mg/Kg		138	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25613/1-A
Matrix: Solid
Analysis Batch: 25823

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/18/22 13:38	1

Lab Sample ID: LCS 880-25613/2-A
Matrix: Solid
Analysis Batch: 25823

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	253.2		mg/Kg		101	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-25613/3-A
Matrix: Solid
Analysis Batch: 25823

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	253.3		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-2311-A-11-B MS
Matrix: Solid
Analysis Batch: 25823

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	1310		1240	2502		mg/Kg		97	90 - 110

Lab Sample ID: 890-2311-A-11-C MSD
Matrix: Solid
Analysis Batch: 25823

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	1310		1240	2501		mg/Kg		97	90 - 110	0	20

Lab Sample ID: MB 880-25615/1-A
Matrix: Solid
Analysis Batch: 25825

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/19/22 01:10	1

Lab Sample ID: LCS 880-25615/2-A
Matrix: Solid
Analysis Batch: 25825

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	244.8		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-25615/3-A
Matrix: Solid
Analysis Batch: 25825

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	244.4		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 880-14808-A-1-B MS
Matrix: Solid
Analysis Batch: 25825

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	57.6		252	293.4		mg/Kg		94	90 - 110

Lab Sample ID: 880-14808-A-1-C MSD
Matrix: Solid
Analysis Batch: 25825

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	57.6		252	293.0		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

GC VOA

Prep Batch: 25638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25638/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 25650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Total/NA	Solid	5035	
890-2312-2	FS12	Total/NA	Solid	5035	
890-2312-3	FS13	Total/NA	Solid	5035	
890-2312-4	FS14	Total/NA	Solid	5035	
890-2312-5	FS15	Total/NA	Solid	5035	
890-2312-6	SW05	Total/NA	Solid	5035	
890-2312-7	SW06	Total/NA	Solid	5035	
890-2312-8	SW07	Total/NA	Solid	5035	
890-2312-9	SW08	Total/NA	Solid	5035	
890-2312-10	SW09	Total/NA	Solid	5035	
MB 880-25650/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25650/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25650/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2311-A-10-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2311-A-10-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 25671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Total/NA	Solid	8021B	25650
890-2312-2	FS12	Total/NA	Solid	8021B	25650
890-2312-3	FS13	Total/NA	Solid	8021B	25650
890-2312-4	FS14	Total/NA	Solid	8021B	25650
890-2312-5	FS15	Total/NA	Solid	8021B	25650
890-2312-6	SW05	Total/NA	Solid	8021B	25650
890-2312-7	SW06	Total/NA	Solid	8021B	25650
890-2312-8	SW07	Total/NA	Solid	8021B	25650
890-2312-9	SW08	Total/NA	Solid	8021B	25650
890-2312-10	SW09	Total/NA	Solid	8021B	25650
MB 880-25638/5-A	Method Blank	Total/NA	Solid	8021B	25638
MB 880-25650/5-A	Method Blank	Total/NA	Solid	8021B	25650
LCS 880-25650/1-A	Lab Control Sample	Total/NA	Solid	8021B	25650
LCSD 880-25650/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25650
890-2311-A-10-G MS	Matrix Spike	Total/NA	Solid	8021B	25650
890-2311-A-10-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25650

Analysis Batch: 25800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Total/NA	Solid	Total BTEX	
890-2312-2	FS12	Total/NA	Solid	Total BTEX	
890-2312-3	FS13	Total/NA	Solid	Total BTEX	
890-2312-4	FS14	Total/NA	Solid	Total BTEX	
890-2312-5	FS15	Total/NA	Solid	Total BTEX	
890-2312-6	SW05	Total/NA	Solid	Total BTEX	
890-2312-7	SW06	Total/NA	Solid	Total BTEX	
890-2312-8	SW07	Total/NA	Solid	Total BTEX	
890-2312-9	SW08	Total/NA	Solid	Total BTEX	
890-2312-10	SW09	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

GC Semi VOA

Prep Batch: 25667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Total/NA	Solid	8015NM Prep	
890-2312-2	FS12	Total/NA	Solid	8015NM Prep	
890-2312-5	FS15	Total/NA	Solid	8015NM Prep	
890-2312-6	SW05	Total/NA	Solid	8015NM Prep	
890-2312-7	SW06	Total/NA	Solid	8015NM Prep	
890-2312-8	SW07	Total/NA	Solid	8015NM Prep	
890-2312-9	SW08	Total/NA	Solid	8015NM Prep	
890-2312-10	SW09	Total/NA	Solid	8015NM Prep	
MB 880-25667/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25667/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-14809-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-14809-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Total/NA	Solid	8015B NM	25667
890-2312-2	FS12	Total/NA	Solid	8015B NM	25667
890-2312-5	FS15	Total/NA	Solid	8015B NM	25667
890-2312-6	SW05	Total/NA	Solid	8015B NM	25667
890-2312-7	SW06	Total/NA	Solid	8015B NM	25667
890-2312-8	SW07	Total/NA	Solid	8015B NM	25667
890-2312-9	SW08	Total/NA	Solid	8015B NM	25667
890-2312-10	SW09	Total/NA	Solid	8015B NM	25667
MB 880-25667/1-A	Method Blank	Total/NA	Solid	8015B NM	25667
LCS 880-25667/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25667
LCSD 880-25667/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25667
880-14809-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	25667
880-14809-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25667

Analysis Batch: 25760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Total/NA	Solid	8015 NM	
890-2312-2	FS12	Total/NA	Solid	8015 NM	
890-2312-3	FS13	Total/NA	Solid	8015 NM	
890-2312-4	FS14	Total/NA	Solid	8015 NM	
890-2312-5	FS15	Total/NA	Solid	8015 NM	
890-2312-6	SW05	Total/NA	Solid	8015 NM	
890-2312-7	SW06	Total/NA	Solid	8015 NM	
890-2312-8	SW07	Total/NA	Solid	8015 NM	
890-2312-9	SW08	Total/NA	Solid	8015 NM	
890-2312-10	SW09	Total/NA	Solid	8015 NM	

Analysis Batch: 25770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-3	FS13	Total/NA	Solid	8015B NM	25829
890-2312-4	FS14	Total/NA	Solid	8015B NM	25829
MB 880-25829/1-A	Method Blank	Total/NA	Solid	8015B NM	25829
LCS 880-25829/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25829
LCSD 880-25829/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25829
890-2316-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	25829

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

GC Semi VOA (Continued)

Analysis Batch: 25770 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2316-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25829

Prep Batch: 25829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-3	FS13	Total/NA	Solid	8015NM Prep	
890-2312-4	FS14	Total/NA	Solid	8015NM Prep	
MB 880-25829/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25829/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25829/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2316-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2316-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 25613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Soluble	Solid	DI Leach	
890-2312-2	FS12	Soluble	Solid	DI Leach	
890-2312-3	FS13	Soluble	Solid	DI Leach	
890-2312-4	FS14	Soluble	Solid	DI Leach	
890-2312-5	FS15	Soluble	Solid	DI Leach	
890-2312-6	SW05	Soluble	Solid	DI Leach	
890-2312-7	SW06	Soluble	Solid	DI Leach	
890-2312-8	SW07	Soluble	Solid	DI Leach	
MB 880-25613/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25613/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25613/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2311-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2311-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 25615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-9	SW08	Soluble	Solid	DI Leach	
890-2312-10	SW09	Soluble	Solid	DI Leach	
MB 880-25615/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25615/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25615/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14808-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-14808-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 25823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-1	FS11	Soluble	Solid	300.0	25613
890-2312-2	FS12	Soluble	Solid	300.0	25613
890-2312-3	FS13	Soluble	Solid	300.0	25613
890-2312-4	FS14	Soluble	Solid	300.0	25613
890-2312-5	FS15	Soluble	Solid	300.0	25613
890-2312-6	SW05	Soluble	Solid	300.0	25613
890-2312-7	SW06	Soluble	Solid	300.0	25613
890-2312-8	SW07	Soluble	Solid	300.0	25613
MB 880-25613/1-A	Method Blank	Soluble	Solid	300.0	25613

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

HPLC/IC (Continued)

Analysis Batch: 25823 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-25613/2-A	Lab Control Sample	Soluble	Solid	300.0	25613
LCSD 880-25613/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25613
890-2311-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	25613
890-2311-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	25613

Analysis Batch: 25825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2312-9	SW08	Soluble	Solid	300.0	25615
890-2312-10	SW09	Soluble	Solid	300.0	25615
MB 880-25615/1-A	Method Blank	Soluble	Solid	300.0	25615
LCS 880-25615/2-A	Lab Control Sample	Soluble	Solid	300.0	25615
LCSD 880-25615/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25615
880-14808-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	25615
880-14808-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	25615

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: FS11
Date Collected: 05/12/22 10:00
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-1
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			5.03 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 00:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 15:09	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 17:38	CH	XEN MID

Client Sample ID: FS12
Date Collected: 05/12/22 10:05
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-2
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			5.01 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 00:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 15:31	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 18:06	CH	XEN MID

Client Sample ID: FS13
Date Collected: 05/12/22 10:10
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-3
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			5.02 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 01:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25829	05/18/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25770	05/19/22 00:58	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 18:15	CH	XEN MID

Client Sample ID: FS14
Date Collected: 05/12/22 10:15
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 01:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: FS14
Date Collected: 05/12/22 10:15
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-4
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			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25829	05/18/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25770	05/19/22 01:19	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 18:25	CH	XEN MID

Client Sample ID: FS15
Date Collected: 05/12/22 10:20
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 01:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 16:57	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 18:34	CH	XEN MID

Client Sample ID: SW05
Date Collected: 05/12/22 10:25
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 02:20	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 17:19	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 18:43	CH	XEN MID

Client Sample ID: SW06
Date Collected: 05/12/22 10:30
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-7
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			5.00 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 02:41	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 17:41	SM	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Client Sample ID: SW06

Date Collected: 05/12/22 10:30
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-7
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			5.03 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 18:52	CH	XEN MID

Client Sample ID: SW07

Date Collected: 05/12/22 10:35
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 04:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 18:03	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25613	05/16/22 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			25823	05/18/22 19:01	CH	XEN MID

Client Sample ID: SW08

Date Collected: 05/12/22 10:40
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-9
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			4.97 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 04:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 18:25	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25615	05/16/22 10:55	CH	XEN MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	25825	05/19/22 05:19	CH	XEN MID

Client Sample ID: SW09

Date Collected: 05/12/22 10:45
Date Received: 05/13/22 14:55

Lab Sample ID: 890-2312-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25650	05/16/22 15:47	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/18/22 04:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25800	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25760	05/17/22 16:30	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25667	05/17/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25669	05/17/22 18:47	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25615	05/16/22 10:55	CH	XEN MID
Soluble	Analysis	300.0		1			25825	05/19/22 05:28	CH	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

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	T104704400-21-22	06-30-22

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 83

Job ID: 890-2312-1
SDG: 03D2024024

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 890-2312-1
SDG: 03D2024024

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2312-1	FS11	Solid	05/12/22 10:00	05/13/22 14:55	2
890-2312-2	FS12	Solid	05/12/22 10:05	05/13/22 14:55	2
890-2312-3	FS13	Solid	05/12/22 10:10	05/13/22 14:55	2
890-2312-4	FS14	Solid	05/12/22 10:15	05/13/22 14:55	2
890-2312-5	FS15	Solid	05/12/22 10:20	05/13/22 14:55	2
890-2312-6	SW05	Solid	05/12/22 10:25	05/13/22 14:55	0 - 2
890-2312-7	SW06	Solid	05/12/22 10:30	05/13/22 14:55	0 - 2
890-2312-8	SW07	Solid	05/12/22 10:35	05/13/22 14:55	0 - 2
890-2312-9	SW08	Solid	05/12/22 10:40	05/13/22 14:55	0 - 2
890-2312-10	SW09	Solid	05/12/22 10:45	05/13/22 14:55	0 - 2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	705 W Wadley Ave. Suite 240	Address:	705 W Wadley Ave. Suite 240
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, TX 79705
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 83	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024024	Due Date:	5 Day TAT
Project Location:	Rural Lea	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Gilbert Moreno		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	T-NM-07	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.8	
Total Containers:		Corrected Temperature:	5.6	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS11	S	5.12.22	10:00	2'	Comp	1		X	X	X
FS12	S	5.12.22	10:05	2'	Comp	1		X	X	X
FS13	S	5.12.22	10:10	2'	Comp	1		X	X	X
FS14	S	5.12.22	10:15	2'	Comp	1		X	X	X
FS15	S	5.12.22	10:20	2'	Comp	1		X	X	X
SW05	S	5.12.22	10:25	0-2'	Comp	1		X	X	X
SW06	S	5.12.22	10:30	0-2'	Comp	1		X	X	X
SW07	S	5.12.22	10:35	0-2'	Comp	1		X	X	X
SW08	S	5.12.22	10:40	0-2'	Comp	1		X	X	X
SW09	S	5.12.22	10:45	0-2'	Comp	1		X	X	X

890-2312 Chain of Custody

Preservative Codes

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

Sample Comments

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

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		5/13/22 7:55	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2312-1
SDG Number: 03D2024024

Login Number: 2312
List Number: 1
Creator: Olivas, Nathaniel

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: 890-2312-1
SDG Number: 03D2024024

Login Number: 2312
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/17/22 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 Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-17240-1
Laboratory Sample Delivery Group: Lea County
Client Project/Site: MCA 83
Revision: 1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
7/29/2022 11:40:24 AM

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

Client: Ensolum
Project/Site: MCA 83

Laboratory Job ID: 880-17240-1
SDG: Lea County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
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 83

Job ID: 880-17240-1
SDG: Lea County

Job ID: 880-17240-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-17240-1

REVISION

The report being provided is a revision of the original report sent on 7/26/2022. The report (revision 1) is being revised due to BTEX reporting as TRRP, need to be as Level II.

Report revision history

Receipt
The samples were received on 7/21/2022 3:55 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 1.5°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30303 and analytical batch 880-30324 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-2604-A-1-A MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30364 and analytical batch 880-30324 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30363 and analytical batch 880-30368 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 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30432 and analytical batch 880-30368 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.

Method 8015MOD_NM: The diesel range was biased high in the LCS, however since only an LCS or LCSD are required the data was qualified and reported. (LCS 880-30432/2-A)

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-17262-A-11-F MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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 83

Job ID: 880-17240-1
SDG: Lea County

Client Sample ID: FS01A
Date Collected: 07/20/22 12:45
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/21/22 16:45	07/22/22 14:14	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/21/22 16:45	07/22/22 14:14	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/21/22 16:45	07/22/22 14:14	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/21/22 16:45	07/22/22 14:14	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/21/22 16:45	07/22/22 14:14	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/21/22 16:45	07/22/22 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/21/22 16:45*	*07/22/22 14:14*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/21/22 16:45*	*07/22/22 14:14*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/22/22 16:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**58.0**		49.9		mg/Kg			07/25/22 09:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/25/22 12:08	07/26/22 01:03	1
Diesel Range Organics (Over C10-C28)	**58.0**		49.9		mg/Kg		07/25/22 12:08	07/26/22 01:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/25/22 12:08	07/26/22 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/25/22 12:08*	*07/26/22 01:03*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/25/22 12:08*	*07/26/22 01:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**93.7**		5.05	0.867	mg/Kg			07/23/22 16:25	1

Client Sample ID: FS03A
Date Collected: 07/20/22 12:48
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 14:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 14:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 14:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/21/22 16:45	07/22/22 14:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 14:40	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/21/22 16:45	07/22/22 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*07/21/22 16:45*	*07/22/22 14:40*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Client Sample ID: FS03A
Date Collected: 07/20/22 12:48
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/21/22 16:45*	*07/22/22 14:40*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			07/22/22 16:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/25/22 09:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/22/22 10:22	07/22/22 20:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/22/22 10:22	07/22/22 20:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/22/22 10:22	07/22/22 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*65*	*S1-*	*70 - 130*	*07/22/22 10:22*	*07/22/22 20:30*	*1*
o-Terphenyl	*71*		*70 - 130*	*07/22/22 10:22*	*07/22/22 20:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41.9**		4.99	0.857	mg/Kg			07/23/22 16:34	1

Client Sample ID: FS04A
Date Collected: 07/20/22 12:50
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 15:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 15:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 15:07	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/21/22 16:45	07/22/22 15:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 15:07	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/21/22 16:45	07/22/22 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/21/22 16:45*	*07/22/22 15:07*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/21/22 16:45*	*07/22/22 15:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/22/22 16:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/25/22 09:39	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Client Sample ID: FS04A
Date Collected: 07/20/22 12:50
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/22/22 10:22	07/22/22 20:52	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/22/22 10:22	07/22/22 20:52	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/22/22 10:22	07/22/22 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/22/22 10:22*	*07/22/22 20:52*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/22/22 10:22*	*07/22/22 20:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**60.2**		4.97	0.853	mg/Kg			07/23/22 17:02	1

Client Sample ID: FS05A
Date Collected: 07/20/22 12:55
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/21/22 16:45	07/22/22 15:33	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/21/22 16:45	07/22/22 15:33	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/21/22 16:45	07/22/22 15:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/21/22 16:45	07/22/22 15:33	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/21/22 16:45	07/22/22 15:33	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/21/22 16:45	07/22/22 15:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*07/21/22 16:45*	*07/22/22 15:33*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*07/21/22 16:45*	*07/22/22 15:33*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/22/22 16:52	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			07/25/22 09:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 01:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/22/22 15:43	07/23/22 01:32	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 01:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*07/22/22 15:43*	*07/23/22 01:32*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/22/22 15:43*	*07/23/22 01:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Client Sample ID: FS05A
Date Collected: 07/20/22 12:55
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.5		4.95	0.850	mg/Kg			07/23/22 17:11	1

Client Sample ID: FS06A
Date Collected: 07/20/22 12:59
Date Received: 07/21/22 15:55
Sample Depth: 2.5

Lab Sample ID: 880-17240-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/21/22 16:45	07/22/22 15:59	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/21/22 16:45	07/22/22 15:59	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/21/22 16:45	07/22/22 15:59	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/21/22 16:45	07/22/22 15:59	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/21/22 16:45	07/22/22 15:59	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/21/22 16:45	07/22/22 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/21/22 16:45*	*07/22/22 15:59*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/21/22 16:45*	*07/22/22 15:59*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/22/22 16:52	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			07/25/22 09:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 01:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/22/22 15:43	07/23/22 01:54	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 01:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*07/22/22 15:43*	*07/23/22 01:54*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/22/22 15:43*	*07/23/22 01:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.6		4.95	0.850	mg/Kg			07/23/22 17:20	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

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)
880-17239-A-1-B MS	Matrix Spike	103	102
880-17239-A-1-C MSD	Matrix Spike Duplicate	107	88
880-17240-1	FS01A	108	94
880-17240-2	FS03A	118	92
880-17240-3	FS04A	112	90
880-17240-4	FS05A	124	93
880-17240-5	FS06A	93	96
890-2604-A-1-A MS	Matrix Spike	133 S1+	99
890-2604-A-1-B MSD	Matrix Spike Duplicate	106	90
LCS 880-30303/1-A	Lab Control Sample	120	95
LCS 880-30364/1-A	Lab Control Sample	119	96
LCSD 880-30303/2-A	Lab Control Sample Dup	104	96
LCSD 880-30364/2-A	Lab Control Sample Dup	122	91
MB 880-30303/5-A	Method Blank	83	91
MB 880-30364/5-A	Method Blank	89	90

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17140-A-23-G MS	Matrix Spike	52 S1-	53 S1-
880-17140-A-23-H MSD	Matrix Spike Duplicate	34 S1-	29 S1-
880-17240-1	FS01A	97	108
880-17240-2	FS03A	65 S1-	71
880-17240-3	FS04A	93	115
880-17240-4	FS05A	88	108
880-17240-5	FS06A	83	101
880-17262-A-11-F MS	Matrix Spike	69 S1-	64 S1-
880-17262-A-11-G MSD	Matrix Spike Duplicate	81	75
890-2614-A-1-D MS	Matrix Spike	21 S1-	17 S1-
890-2614-A-1-E MSD	Matrix Spike Duplicate	11 S1-	6 S1-
LCS 880-30363/2-A	Lab Control Sample	133 S1+	168 S1+
LCS 880-30432/2-A	Lab Control Sample	151 S1+	179 S1+
LCS 880-30590/2-A	Lab Control Sample	98	95
LCSD 880-30363/3-A	Lab Control Sample Dup	117	146 S1+
LCSD 880-30432/3-A	Lab Control Sample Dup	123	155 S1+
LCSD 880-30590/3-A	Lab Control Sample Dup	95	95
MB 880-30363/1-A	Method Blank	129	168 S1+
MB 880-30432/1-A	Method Blank	137 S1+	182 S1+
MB 880-30590/1-A	Method Blank	99	113

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30303/5-A
Matrix: Solid
Analysis Batch: 30324

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30303

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 11:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 11:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 11:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/21/22 16:45	07/22/22 11:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/21/22 16:45	07/22/22 11:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/21/22 16:45	07/22/22 11:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/21/22 16:45*	*07/22/22 11:36*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/21/22 16:45*	*07/22/22 11:36*	*1*

Lab Sample ID: LCS 880-30303/1-A
Matrix: Solid
Analysis Batch: 30324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30303

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09936		mg/Kg		99	70 - 130		
Toluene			0.100	0.09819		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.1966		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.1066		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30303/2-A
Matrix: Solid
Analysis Batch: 30324

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30303

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08885		mg/Kg		89	70 - 130	11	35
Toluene			0.100	0.08775		mg/Kg		88	70 - 130	11	35
Ethylbenzene			0.100	0.09068		mg/Kg		91	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.1758		mg/Kg		88	70 - 130	11	35
o-Xylene			0.100	0.09466		mg/Kg		95	70 - 130	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: MB 880-30364/5-A
Matrix: Solid
Analysis Batch: 30324

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30364

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/22/22 10:26	07/23/22 01:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/22/22 10:26	07/23/22 01:39	1

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QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

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

Lab Sample ID: MB 880-30364/5-A
Matrix: Solid
Analysis Batch: 30324

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30364

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/22/22 10:26	07/23/22 01:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/22/22 10:26	07/23/22 01:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/22/22 10:26	07/23/22 01:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/22/22 10:26	07/23/22 01:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/22/22 10:26*	*07/23/22 01:39*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/22/22 10:26*	*07/23/22 01:39*	*1*

Lab Sample ID: LCS 880-30364/1-A
Matrix: Solid
Analysis Batch: 30324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30364

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09390		mg/Kg		94	70 - 130		
Toluene			0.100	0.09268		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.09380		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1811		mg/Kg		91	70 - 130		
o-Xylene			0.100	0.1004		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-30364/2-A
Matrix: Solid
Analysis Batch: 30324

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30364

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09312		mg/Kg		93	70 - 130	1	35
Toluene			0.100	0.08957		mg/Kg		90	70 - 130	3	35
Ethylbenzene			0.100	0.09365		mg/Kg		94	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.1803		mg/Kg		90	70 - 130	0	35
o-Xylene			0.100	0.1002		mg/Kg		100	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

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

Lab Sample ID: MB 880-30363/1-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30363

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		07/22/22 10:22	07/22/22 11:52	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

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

Lab Sample ID: MB 880-30363/1-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30363

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/22/22 10:22	07/22/22 11:52	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/22/22 10:22	07/22/22 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*07/22/22 10:22*	*07/22/22 11:52*	*1*
o-Terphenyl	*168*	*S1+*	*70 - 130*	*07/22/22 10:22*	*07/22/22 11:52*	*1*

Lab Sample ID: LCS 880-30363/2-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30363

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	833.0		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1223		mg/Kg		122	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*133*	*S1+*	*70 - 130*
o-Terphenyl	*168*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-30363/3-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30363

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	784.4		mg/Kg		78	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	1065		mg/Kg		107	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*146*	*S1+*	*70 - 130*

Lab Sample ID: MB 880-30432/1-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30432

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		07/22/22 15:43	07/22/22 21:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/22/22 15:43	07/22/22 21:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/22/22 15:43	07/22/22 21:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*07/22/22 15:43*	*07/22/22 21:35*	*1*

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

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

Lab Sample ID: MB 880-30432/1-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30432

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	182	S1+	70 - 130	07/22/22 15:43	07/22/22 21:35	1

Lab Sample ID: LCS 880-30432/2-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30432

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	952.7		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1360	*+	mg/Kg		136	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	151	S1+	70 - 130
o-Terphenyl	179	S1+	70 - 130

Lab Sample ID: LCSD 880-30432/3-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30432

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	812.0		mg/Kg		81	70 - 130	16	20
Diesel Range Organics (Over C10-C28)			1000	1147		mg/Kg		115	70 - 130	17	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	155	S1+	70 - 130

Lab Sample ID: MB 880-30590/1-A
Matrix: Solid
Analysis Batch: 30512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30590

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		07/25/22 12:08	07/25/22 20:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/22 12:08	07/25/22 20:46	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 12:08	07/25/22 20:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	07/25/22 12:08	07/25/22 20:46	1
o-Terphenyl	113		70 - 130	07/25/22 12:08	07/25/22 20:46	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

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

Lab Sample ID: LCS 880-30590/2-A
Matrix: Solid
Analysis Batch: 30512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30590

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1137		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1051		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30590/3-A
Matrix: Solid
Analysis Batch: 30512

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30590

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1165		mg/Kg		116	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1008		mg/Kg		101	70 - 130	4	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30301/1-A
Matrix: Solid
Analysis Batch: 30414

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	0.858	mg/Kg			07/23/22 12:57	1

Lab Sample ID: LCS 880-30301/2-A
Matrix: Solid
Analysis Batch: 30414

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267.2		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-30301/3-A
Matrix: Solid
Analysis Batch: 30414

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	266.8		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

GC VOA

Prep Batch: 30303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Total/NA	Solid	5035	
880-17240-2	FS03A	Total/NA	Solid	5035	
880-17240-3	FS04A	Total/NA	Solid	5035	
880-17240-4	FS05A	Total/NA	Solid	5035	
880-17240-5	FS06A	Total/NA	Solid	5035	
MB 880-30303/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30303/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30303/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 30324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Total/NA	Solid	8021B	30303
880-17240-2	FS03A	Total/NA	Solid	8021B	30303
880-17240-3	FS04A	Total/NA	Solid	8021B	30303
880-17240-4	FS05A	Total/NA	Solid	8021B	30303
880-17240-5	FS06A	Total/NA	Solid	8021B	30303
MB 880-30303/5-A	Method Blank	Total/NA	Solid	8021B	30303
MB 880-30364/5-A	Method Blank	Total/NA	Solid	8021B	30364
LCS 880-30303/1-A	Lab Control Sample	Total/NA	Solid	8021B	30303
LCS 880-30364/1-A	Lab Control Sample	Total/NA	Solid	8021B	30364
LCSD 880-30303/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30303
LCSD 880-30364/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30364

Prep Batch: 30364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30364/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30364/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30364/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 30450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Total/NA	Solid	Total BTEX	
880-17240-2	FS03A	Total/NA	Solid	Total BTEX	
880-17240-3	FS04A	Total/NA	Solid	Total BTEX	
880-17240-4	FS05A	Total/NA	Solid	Total BTEX	
880-17240-5	FS06A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-2	FS03A	Total/NA	Solid	8015NM Prep	
880-17240-3	FS04A	Total/NA	Solid	8015NM Prep	
MB 880-30363/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30363/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30363/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-2	FS03A	Total/NA	Solid	8015B NM	30363
880-17240-3	FS04A	Total/NA	Solid	8015B NM	30363

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

GC Semi VOA (Continued)

Analysis Batch: 30368 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-4	FS05A	Total/NA	Solid	8015B NM	30432
880-17240-5	FS06A	Total/NA	Solid	8015B NM	30432
MB 880-30363/1-A	Method Blank	Total/NA	Solid	8015B NM	30363
MB 880-30432/1-A	Method Blank	Total/NA	Solid	8015B NM	30432
LCS 880-30363/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30363
LCS 880-30432/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30432
LCSD 880-30363/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30363
LCSD 880-30432/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30432

Prep Batch: 30432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-4	FS05A	Total/NA	Solid	8015NM Prep	
880-17240-5	FS06A	Total/NA	Solid	8015NM Prep	
MB 880-30432/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30432/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30432/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Total/NA	Solid	8015B NM	30590
MB 880-30590/1-A	Method Blank	Total/NA	Solid	8015B NM	30590
LCS 880-30590/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30590
LCSD 880-30590/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30590

Analysis Batch: 30521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Total/NA	Solid	8015 NM	
880-17240-2	FS03A	Total/NA	Solid	8015 NM	
880-17240-3	FS04A	Total/NA	Solid	8015 NM	
880-17240-4	FS05A	Total/NA	Solid	8015 NM	
880-17240-5	FS06A	Total/NA	Solid	8015 NM	

Prep Batch: 30590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Total/NA	Solid	8015NM Prep	
MB 880-30590/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30590/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30590/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 30301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Soluble	Solid	DI Leach	
880-17240-2	FS03A	Soluble	Solid	DI Leach	
880-17240-3	FS04A	Soluble	Solid	DI Leach	
880-17240-4	FS05A	Soluble	Solid	DI Leach	
880-17240-5	FS06A	Soluble	Solid	DI Leach	
MB 880-30301/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30301/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30301/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

HPLC/IC

Analysis Batch: 30414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17240-1	FS01A	Soluble	Solid	300.0	30301
880-17240-2	FS03A	Soluble	Solid	300.0	30301
880-17240-3	FS04A	Soluble	Solid	300.0	30301
880-17240-4	FS05A	Soluble	Solid	300.0	30301
880-17240-5	FS06A	Soluble	Solid	300.0	30301
MB 880-30301/1-A	Method Blank	Soluble	Solid	300.0	30301
LCS 880-30301/2-A	Lab Control Sample	Soluble	Solid	300.0	30301
LCSD 880-30301/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30301

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Client Sample ID: FS01A
Date Collected: 07/20/22 12:45
Date Received: 07/21/22 15:55

Lab Sample ID: 880-17240-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30303	07/21/22 16:45	MR	XEN MID
Total/NA	Analysis	8021B		1	30324	07/22/22 14:14	SM	XEN MID
Total/NA	Analysis	Total BTEX		1	30450	07/22/22 16:52	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30521	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30590	07/25/22 12:08	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30512	07/26/22 01:03	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 16:25	CH	XEN MID

Client Sample ID: FS03A
Date Collected: 07/20/22 12:48
Date Received: 07/21/22 15:55

Lab Sample ID: 880-17240-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30303	07/21/22 16:45	MR	XEN MID
Total/NA	Analysis	8021B		1	30324	07/22/22 14:40	SM	XEN MID
Total/NA	Analysis	Total BTEX		1	30450	07/22/22 16:52	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30521	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30363	07/22/22 10:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/22/22 20:30	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 16:34	CH	XEN MID

Client Sample ID: FS04A
Date Collected: 07/20/22 12:50
Date Received: 07/21/22 15:55

Lab Sample ID: 880-17240-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30303	07/21/22 16:45	MR	XEN MID
Total/NA	Analysis	8021B		1	30324	07/22/22 15:07	SM	XEN MID
Total/NA	Analysis	Total BTEX		1	30450	07/22/22 16:52	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30521	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30363	07/22/22 10:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/22/22 20:52	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 17:02	CH	XEN MID

Client Sample ID: FS05A
Date Collected: 07/20/22 12:55
Date Received: 07/21/22 15:55

Lab Sample ID: 880-17240-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30303	07/21/22 16:45	MR	XEN MID
Total/NA	Analysis	8021B		1	30324	07/22/22 15:33	SM	XEN MID
Total/NA	Analysis	Total BTEX		1	30450	07/22/22 16:52	SM	XEN MID

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Client Sample ID: FS05A
Date Collected: 07/20/22 12:55
Date Received: 07/21/22 15:55

Lab Sample ID: 880-17240-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	30521	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30432	07/22/22 15:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/23/22 01:32	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 17:11	CH	XEN MID

Client Sample ID: FS06A
Date Collected: 07/20/22 12:59
Date Received: 07/21/22 15:55

Lab Sample ID: 880-17240-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30303	07/21/22 16:45	MR	XEN MID
Total/NA	Analysis	8021B		1	30324	07/22/22 15:59	SM	XEN MID
Total/NA	Analysis	Total BTEX		1	30450	07/22/22 16:52	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30521	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30432	07/22/22 15:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/23/22 01:54	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 17:20	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

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 83

Job ID: 880-17240-1
SDG: Lea County

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17240-1
SDG: Lea County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-17240-1	FS01A	Solid	07/20/22 12:45	07/21/22 15:55	2.5
880-17240-2	FS03A	Solid	07/20/22 12:48	07/21/22 15:55	2.5
880-17240-3	FS04A	Solid	07/20/22 12:50	07/21/22 15:55	2.5
880-17240-4	FS05A	Solid	07/20/22 12:55	07/21/22 15:55	2.5
880-17240-5	FS06A	Solid	07/20/22 12:59	07/21/22 15:55	2.5

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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: 17240

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Project Manager:	Kalei Jennings	Bill to (if different)	Kalei Jennigns
Company Name.	Ensolum, LLC	Company Name	Ensolum, LLC
Address.	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP.	Midland, TX 79701	City, State ZIP	Midland, TX 79701
Phone	817-683-2503	Email:	kjennings@ensolum.com

Work Order Comments

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

Project Name:	MCA 83
Project Number:	03D2057015
Project Location.	LEA COUNTY
Sampler's Name:	HADLIE GREEN
PO #:	

Turn Around
☐ Routine ☒ Rush
Due Date: 3 DAY
TAT starts the day received by the lab, if received by 4 30pm

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID.	IR8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	+.20
Sample Custody Seals.	Yes No (N/A)	Temperature Reading:	1.3
Total Containers:		Corrected Temperature.	1.5

Preservative Codes

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

880-17240 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021	TPH 8015	CHLORIDES 300
FS01A	SL	7-20-22	1245	2.5	C	1		X	X	X
FS03A			1248							
FS04A			1250							
FS05A			1255							
FS06A	↓	↓	1259	↓	↓	↓		↓	↓	↓

Sample Comments

5 - 4oz

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 Hadlie Green		7/21/22	2		
3		15:26	4		
5			6		

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-17240-1
SDG Number: Lea County

Login Number: 17240
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

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 Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-17242-1
Laboratory Sample Delivery Group: Lea County
Client Project/Site: MCA 83

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
7/25/2022 10:33:14 AM

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

Client: Ensolum
Project/Site: MCA 83

Laboratory Job ID: 880-17242-1
SDG: Lea County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Job ID: 880-17242-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-17242-1

Receipt
The samples were received on 7/21/2022 3:26 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 3.3°C

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30432 and analytical batch 880-30368 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.

Method 8015MOD_NM: The diesel range was biased high in the LCS, however since only an LCS or LCSD are required the data was qualified and reported. (LCS 880-30432/2-A)

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 83

Job ID: 880-17242-1
SDG: Lea County

Client Sample ID: SS01

Date Collected: 07/20/22 11:24
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17242-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		07/22/22 08:50	07/22/22 11:36	1
Toluene	<0.00201	U	0.00201	0.000459	mg/Kg		07/22/22 08:50	07/22/22 11:36	1
Ethylbenzene	<0.00201	U	0.00201	0.000568	mg/Kg		07/22/22 08:50	07/22/22 11:36	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00102	mg/Kg		07/22/22 08:50	07/22/22 11:36	1
o-Xylene	<0.00201	U	0.00201	0.000346	mg/Kg		07/22/22 08:50	07/22/22 11:36	1
Xylenes, Total	<0.00402	U	0.00402	0.00102	mg/Kg		07/22/22 08:50	07/22/22 11:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/22/22 08:50*	*07/22/22 11:36*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/22/22 08:50*	*07/22/22 11:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/25/22 09:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/25/22 09:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 02:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/22/22 15:43	07/23/22 02:15	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/22/22 15:43*	*07/23/22 02:15*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/22/22 15:43*	*07/23/22 02:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.1**		5.03	0.863	mg/Kg			07/23/22 17:29	1

Client Sample ID: SS02

Date Collected: 07/20/22 11:27
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17242-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:56	1
Ethylbenzene	**0.00931**		0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:56	1
m-Xylene & p-Xylene	**0.0118**		0.00399		mg/Kg		07/22/22 08:50	07/22/22 11:56	1
o-Xylene	**0.0164**		0.00200		mg/Kg		07/22/22 08:50	07/22/22 11:56	1
Xylenes, Total	**0.0282**		0.00399		mg/Kg		07/22/22 08:50	07/22/22 11:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*07/22/22 08:50*	*07/22/22 11:56*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Client Sample ID: SS02

Date Collected: 07/20/22 11:27
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17242-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/22/22 08:50*	*07/22/22 11:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0375**		0.00399		mg/Kg			07/25/22 09:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/25/22 09:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 02:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/22/22 15:43	07/23/22 02:37	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/22/22 15:43	07/23/22 02:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*07/22/22 15:43*	*07/23/22 02:37*	*1*
o-Terphenyl	*83*		*70 - 130*	*07/22/22 15:43*	*07/23/22 02:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.58**		5.04	0.865	mg/Kg			07/23/22 17:39	1

Client Sample ID: SS03

Date Collected: 07/20/22 11:33
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17242-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		07/22/22 08:50	07/22/22 12:17	1
Toluene	<0.00199	U	0.00199	0.000453	mg/Kg		07/22/22 08:50	07/22/22 12:17	1
Ethylbenzene	<0.00199	U	0.00199	0.000562	mg/Kg		07/22/22 08:50	07/22/22 12:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00100	mg/Kg		07/22/22 08:50	07/22/22 12:17	1
o-Xylene	<0.00199	U	0.00199	0.000342	mg/Kg		07/22/22 08:50	07/22/22 12:17	1
Xylenes, Total	<0.00398	U	0.00398	0.00100	mg/Kg		07/22/22 08:50	07/22/22 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*07/22/22 08:50*	*07/22/22 12:17*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/22/22 08:50*	*07/22/22 12:17*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/25/22 09:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/25/22 09:39	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Client Sample ID: SS03

Lab Sample ID: 880-17242-3
Matrix: Solid
Date Collected: 07/20/22 11:33
Date Received: 07/21/22 15:26
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		07/22/22 15:43	07/23/22 02:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/22/22 15:43	07/23/22 02:59	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/22/22 15:43	07/23/22 02:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*07/22/22 15:43*	*07/23/22 02:59*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/22/22 15:43*	*07/23/22 02:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.2**		5.04	0.865	mg/Kg			07/23/22 17:48	1

Client Sample ID: SS04

Lab Sample ID: 880-17242-4
Matrix: Solid
Date Collected: 07/20/22 11:36
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		07/22/22 08:50	07/22/22 12:37	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		07/22/22 08:50	07/22/22 12:37	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		07/22/22 08:50	07/22/22 12:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		07/22/22 08:50	07/22/22 12:37	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		07/22/22 08:50	07/22/22 12:37	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		07/22/22 08:50	07/22/22 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/22/22 08:50*	*07/22/22 12:37*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/22/22 08:50*	*07/22/22 12:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/25/22 09:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/25/22 09:39	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/22/22 15:43	07/23/22 03:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/22/22 15:43	07/23/22 03:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/22/22 15:43	07/23/22 03:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/22/22 15:43*	*07/23/22 03:21*	*1*
o-Terphenyl	*107*		*70 - 130*	*07/22/22 15:43*	*07/23/22 03:21*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Client Sample ID: SS04
Date Collected: 07/20/22 11:36
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17242-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.1		4.97	0.853	mg/Kg			07/23/22 17:57	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

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)
880-17242-1	SS01	106	81
880-17242-1 MS	SS01	104	98
880-17242-1 MSD	SS01	106	97
880-17242-2	SS02	86	86
880-17242-3	SS03	103	86
880-17242-4	SS04	105	84
LCS 880-30328/1-A	Lab Control Sample	105	95
LCSD 880-30328/2-A	Lab Control Sample Dup	103	96
MB 880-30328/5-A	Method Blank	97	86

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-17242-1	SS01	82	101
880-17242-2	SS02	77	83
880-17242-3	SS03	83	98
880-17242-4	SS04	89	107
890-2614-A-1-D MS	Matrix Spike	21 S1-	17 S1-
890-2614-A-1-E MSD	Matrix Spike Duplicate	11 S1-	6 S1-
LCS 880-30432/2-A	Lab Control Sample	151 S1+	179 S1+
LCSD 880-30432/3-A	Lab Control Sample Dup	123	155 S1+
MB 880-30432/1-A	Method Blank	137 S1+	182 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30328/5-A
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30328

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		07/22/22 08:50	07/22/22 11:14	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		07/22/22 08:50	07/22/22 11:14	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		07/22/22 08:50	07/22/22 11:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		07/22/22 08:50	07/22/22 11:14	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		07/22/22 08:50	07/22/22 11:14	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		07/22/22 08:50	07/22/22 11:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*07/22/22 08:50*	*07/22/22 11:14*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/22/22 08:50*	*07/22/22 11:14*	*1*

Lab Sample ID: LCS 880-30328/1-A
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30328

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09966		mg/Kg		100	70 - 130		
Toluene			0.100	0.1016		mg/Kg		102	70 - 130		
Ethylbenzene			0.100	0.1075		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2149		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1165		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-30328/2-A
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30328

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09516		mg/Kg		95	70 - 130	5	35
Toluene			0.100	0.09392		mg/Kg		94	70 - 130	8	35
Ethylbenzene			0.100	0.09809		mg/Kg		98	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1951		mg/Kg		98	70 - 130	10	35
o-Xylene			0.100	0.1064		mg/Kg		106	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-17242-1 MS
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0994	0.08938		mg/Kg		90	70 - 130		
Toluene	<0.00201	U	0.0994	0.08827		mg/Kg		89	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

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

Lab Sample ID: 880-17242-1 MS
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.0994	0.09139		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1822		mg/Kg		92	70 - 130
o-Xylene	<0.00201	U	0.0994	0.09904		mg/Kg		100	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-17242-1 MSD
Matrix: Solid
Analysis Batch: 30325

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30328

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	0.09495		mg/Kg		95	70 - 130	6	35
Toluene	<0.00201	U	0.0998	0.09224		mg/Kg		92	70 - 130	4	35
Ethylbenzene	<0.00201	U	0.0998	0.09556		mg/Kg		96	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1905		mg/Kg		95	70 - 130	4	35
o-Xylene	<0.00201	U	0.0998	0.1037		mg/Kg		104	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-30432/1-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30432

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		07/22/22 15:43	07/22/22 21:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/22/22 15:43	07/22/22 21:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/22/22 15:43	07/22/22 21:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*07/22/22 15:43*	*07/22/22 21:35*	*1*
o-Terphenyl	*182*	*S1+*	*70 - 130*	*07/22/22 15:43*	*07/22/22 21:35*	*1*

Lab Sample ID: LCS 880-30432/2-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30432

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	952.7		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1360	*+	mg/Kg		136	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

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

Lab Sample ID: LCS 880-30432/2-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30432

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	151	S1+	70 - 130
o-Terphenyl	179	S1+	70 - 130

Lab Sample ID: LCSD 880-30432/3-A
Matrix: Solid
Analysis Batch: 30368

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30432

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	812.0		mg/Kg		81	70 - 130	16	20
Diesel Range Organics (Over C10-C28)			1000	1147		mg/Kg		115	70 - 130	17	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	155	S1+	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30301/1-A
Matrix: Solid
Analysis Batch: 30414

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	0.858	mg/Kg			07/23/22 12:57	1

Lab Sample ID: LCS 880-30301/2-A
Matrix: Solid
Analysis Batch: 30414

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267.2		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-30301/3-A
Matrix: Solid
Analysis Batch: 30414

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	266.8		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

GC VOA

Analysis Batch: 30325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Total/NA	Solid	8021B	30328
880-17242-2	SS02	Total/NA	Solid	8021B	30328
880-17242-3	SS03	Total/NA	Solid	8021B	30328
880-17242-4	SS04	Total/NA	Solid	8021B	30328
MB 880-30328/5-A	Method Blank	Total/NA	Solid	8021B	30328
LCS 880-30328/1-A	Lab Control Sample	Total/NA	Solid	8021B	30328
LCSD 880-30328/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30328
880-17242-1 MS	SS01	Total/NA	Solid	8021B	30328
880-17242-1 MSD	SS01	Total/NA	Solid	8021B	30328

Prep Batch: 30328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Total/NA	Solid	5035	
880-17242-2	SS02	Total/NA	Solid	5035	
880-17242-3	SS03	Total/NA	Solid	5035	
880-17242-4	SS04	Total/NA	Solid	5035	
MB 880-30328/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30328/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30328/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17242-1 MS	SS01	Total/NA	Solid	5035	
880-17242-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 30529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Total/NA	Solid	Total BTEX	
880-17242-2	SS02	Total/NA	Solid	Total BTEX	
880-17242-3	SS03	Total/NA	Solid	Total BTEX	
880-17242-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Total/NA	Solid	8015B NM	30432
880-17242-2	SS02	Total/NA	Solid	8015B NM	30432
880-17242-3	SS03	Total/NA	Solid	8015B NM	30432
880-17242-4	SS04	Total/NA	Solid	8015B NM	30432
MB 880-30432/1-A	Method Blank	Total/NA	Solid	8015B NM	30432
LCS 880-30432/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30432
LCSD 880-30432/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30432

Prep Batch: 30432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Total/NA	Solid	8015NM Prep	
880-17242-2	SS02	Total/NA	Solid	8015NM Prep	
880-17242-3	SS03	Total/NA	Solid	8015NM Prep	
880-17242-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-30432/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30432/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30432/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

GC Semi VOA

Analysis Batch: 30526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Total/NA	Solid	8015 NM	
880-17242-2	SS02	Total/NA	Solid	8015 NM	
880-17242-3	SS03	Total/NA	Solid	8015 NM	
880-17242-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Soluble	Solid	DI Leach	
880-17242-2	SS02	Soluble	Solid	DI Leach	
880-17242-3	SS03	Soluble	Solid	DI Leach	
880-17242-4	SS04	Soluble	Solid	DI Leach	
MB 880-30301/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30301/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30301/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 30414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17242-1	SS01	Soluble	Solid	300.0	30301
880-17242-2	SS02	Soluble	Solid	300.0	30301
880-17242-3	SS03	Soluble	Solid	300.0	30301
880-17242-4	SS04	Soluble	Solid	300.0	30301
MB 880-30301/1-A	Method Blank	Soluble	Solid	300.0	30301
LCS 880-30301/2-A	Lab Control Sample	Soluble	Solid	300.0	30301
LCSD 880-30301/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30301

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Client Sample ID: SS01

Lab Sample ID: 880-17242-1

Date Collected: 07/20/22 11:24
Matrix: Solid
Date Received: 07/21/22 15:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30328	07/22/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	30325	07/22/22 11:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30529	07/25/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30526	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30432	07/22/22 15:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/23/22 02:15	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 17:29	CH	XEN MID

Client Sample ID: SS02

Lab Sample ID: 880-17242-2

Date Collected: 07/20/22 11:27
Matrix: Solid
Date Received: 07/21/22 15:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30328	07/22/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	30325	07/22/22 11:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30529	07/25/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30526	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30432	07/22/22 15:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/23/22 02:37	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 17:39	CH	XEN MID

Client Sample ID: SS03

Lab Sample ID: 880-17242-3

Date Collected: 07/20/22 11:33
Matrix: Solid
Date Received: 07/21/22 15:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30328	07/22/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	30325	07/22/22 12:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30529	07/25/22 09:41	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30526	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30432	07/22/22 15:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/23/22 02:59	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 17:48	CH	XEN MID

Client Sample ID: SS04

Lab Sample ID: 880-17242-4

Date Collected: 07/20/22 11:36
Matrix: Solid
Date Received: 07/21/22 15:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30328	07/22/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	30325	07/22/22 12:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30529	07/25/22 09:41	SM	XEN MID

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Client Sample ID: SS04

Date Collected: 07/20/22 11:36
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17242-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	30526	07/25/22 09:39	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30432	07/22/22 15:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30368	07/23/22 03:21	AJ	XEN MID
Soluble	Leach	DI Leach			30301	07/21/22 16:40	SMC	XEN MID
Soluble	Analysis	300.0		1	30414	07/23/22 17:57	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

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 83

Job ID: 880-17242-1
SDG: Lea County

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 83

Job ID: 880-17242-1
SDG: Lea County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-17242-1	SS01	Solid	07/20/22 11:24	07/21/22 15:26	0.5
880-17242-2	SS02	Solid	07/20/22 11:27	07/21/22 15:26	0.5
880-17242-3	SS03	Solid	07/20/22 11:33	07/21/22 15:26	0.5
880-17242-4	SS04	Solid	07/20/22 11:36	07/21/22 15:26	0.5

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: 17242

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennigns
Company Name.	Ensolum, LLC	Company Name.	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address.	601 N Marienfeld St Suite 400
City, State ZIP.	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2503	Email:	kjennings@ensolum.com

Work Order Comments

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

Project Name.	MCA 93
Project Number:	03D2057015
Project Location:	LEA COUNTY
Sampler's Name:	HADUE GREEN
PO #:	

Turn Around
☒ Routine ☒ Rush
Due Date: 3 DAY
TAT starts the day received by the lab, if received by 4 30pm

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID.	IR8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	+.20
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.3
Total Containers:		Corrected Temperature:	1.5

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
$_3PO_4$ HP
$_aHSO_4$ NABIS
$_a2S_2O_3$ $NaSO_3$
Acetate+NaOH Zn
$_3$OH+Ascorbic Acid SAPC

880-17242 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	TPH	CHLORIDES
SS01	SL	7-20-22	1124	0.5	G	1		X	X	X
SS02			1127							
SS03			1133							
SS04			1136							

Parameters

Sample Comments
4 - 4oz

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 Hadue Green	[illegible]	7/21/22 15:26	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-17242-1
SDG Number: Lea County

Login Number: 17242
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

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

ENSOLUM

APPENDIX E

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	NAPP2205440227
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205440227
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 02/23/2022

L48 Spill Volume Estimate Form

NAPP2205440227

Operator:	MCA 83
Asset Area:	Maljamar
Release Discovery Date & Time:	2/4/2022 7:03
Release Type:	Oil Mixture
Provide any known details about the event:	Stuffing box

Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?	See reference table below
Has it rained at least a half inch in the last 24 hours?	See reference table below

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	14.0	10.0	1.00	10.50%	2.077	0.218	20.00%	0.044	0.174
Rectangle B	36.0	19.0	2.00	10.50%	20.292	2.131	20.00%	0.426	1.705
Rectangle C	252.0	1.0	1.00	15.32%	3.738	0.573	20.00%	0.115	0.458
Rectangle D					0.000	0.000		0.000	0.000
Rectangle E					0.000	0.000		0.000	0.000
Rectangle F					0.000	0.000		0.000	0.000
Rectangle G					0.000	0.000		0.000	0.000
Rectangle H					0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
					0.000	0.000		0.000	0.000
					Total Volume Release:	2.921		0.584	2.337

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

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 83632
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	2/23/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205440227
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 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205440227
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: Thomas Haigood Title: HSE Specialist

Signature: Thomas Haigood Date: 8/8/2022

email: Thomas.Haigood@mavresources.com Telephone: 432-523-1807

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205440227
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.***

[X] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[X] 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)

[X] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

[X] 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: Thomas Haigood Title: HSE Specialist

Signature: Date: 8/8/2022

email: Thomas.Haigood@mavresources.com Telephone: 432-523-1807

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Jennifer Nobui Date: 08/10/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ENSOLUM

APPENDIX F

NMOCD Notifications

From: Nobui, Jennifer, EMNRD
To: Kalei Jennings
Cc: Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] Maverick- Sampling Notification (Week of 07/18/22-07/22/22)
Date: Thursday, July 14, 2022 11:06:18 AM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Kalei

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Thursday, July 14, 2022 10:39 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] Maverick- Sampling Notification (Week of 07/18/22-07/22/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, July 14, 2022 10:37 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 07/18/22-07/22/22)

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 July 18, 2022.

Monday:

Tuesday:

Wednesday:

- MCA 83 / NAPP2205440227

Thursday:

- EVGSAU 3202-385 / NAPP2207331663

Friday:

- EVGSAU 3202-385 / NAPP2207331663

Thank you,

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

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 131594

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 131594
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please note the depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old. However, as the most stringent criteria has been met, closure can be granted.	8/10/2022