ENSOLUM

September 15, 2022

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

Re: Closure Request
MCA 120
Incident Number NAPP2209531688
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 120 (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 at the Site. Based on 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 NAPP2209531688.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit O, Section 22, Township 17 South, Range 32 East, in Lea County, New Mexico (32.81611° N, 103.75305° W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On March 22, 2022, a flowline failure resulted in the release of approximately 0.04 barrels (bbls) of produced water and 0.8 bbls of crude oil into the pasture. No fluids were recovered following the release. While the volume of fluids released was below the reporting requirement, 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 April 5, 2022. The release was assigned Incident Number NAPP2209531688.

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 (Appendix A), Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 51 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-12521-POD1, located approximately 5,370 feet southwest of the Site. The groundwater well has a reported depth to groundwater of 92 feet bgs and a total depth of 105 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well record is included in Appendix B.

The closest continuously flowing or significant watercourse to the Site is a freshwater pond, located approximately 2,254 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 that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSEMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On July 20, 2022, Ensolum personnel were at the Site to complete site assessment activities based on information provided on the Form C-141 and visible surface staining observed in the release area. Two preliminary assesment soil samples (SS01 and SS02) were collected within the release extent at a depth of 0.5 feet bgs to assess for the presence or absence of impacted soil. Additionally, four lateral delineation soil samples (SS03 through SS06) were collected in each cardinal direction outside of the release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release. Soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix C.

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

Laboratory analytical results for preliminary assessment soil sample SS02 indicated the TPH concentration exceeded the reclamation requirement. Laboratory analytical results for preliminary soil samples SS01, collected inside the release extent, and lateral delineation soil samples SS03 through SS06, collected outside the release extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirement and successfully define the lateral extent of the release.

Based on visible staining in the release area and laboratory analytical results for preliminary soil sample SS02, excavation activities appeared warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On August 24, 2022, Ensolum personnel were at the Site to oversee excavation activities based on visible staining in the release area and laboratory analytical results for preliminary assessment soil sample SS02. Excavation activities were performed via hand shoveling. To direct excavation activities, soil was field screened for VOCs and chloride.

Following the excavation activities, a 5-point composite sample was collected from the floor of the excavation. The 5-point composite sample was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation at a depth of 0.5-feet bgs. Due to the shallow depth of the excavation, soil from the sidewalls was incorporated into the floor sample. The soil sample was collected, handled, and analyzed following the same procedures as described above.

Laboratory analytical results from FS01 indicated an exceedance of TPH and additional excavation was required. On September 8, 2022, Ensolum personnel were onsite to oversee the removal of additional soil in the vicinity near FS01. Subsequent sample FS01A was collected from the floor of the excavation at a depth of 1-foot bgs after an additional 6-inches of soil was removed from the remediation area.

The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 3. A photographic log of the excavation is included as Appendix C.

Laboratory analytical results for excavation soil sample FS01A, collected from the final excavation extent, indicated concentrations of all COCs were compliant with the Site Closure Criteria and reclamation requirement. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation measured approximately 180 square feet in areal extent. A total of approximately 5 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Disposal Facility located 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 March 22, 2022, release of produced water and crude oil. Laboratory analytical results for the excavation soil sample indicated concentrations of all COCs were compliant with the Site Closure Criteria and reclamation requirement. 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.

Excavation of impacted soil 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 NAPP2209531688.

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, PG
Senior Managing Geologist

cc: Bryce Wagoner, Maverick Natural Resources, LLC
Bureau of Land Management

Attachments:

Figure 1	Site Receptor Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Final C-141
Appendix B	Referenced Well Records
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports

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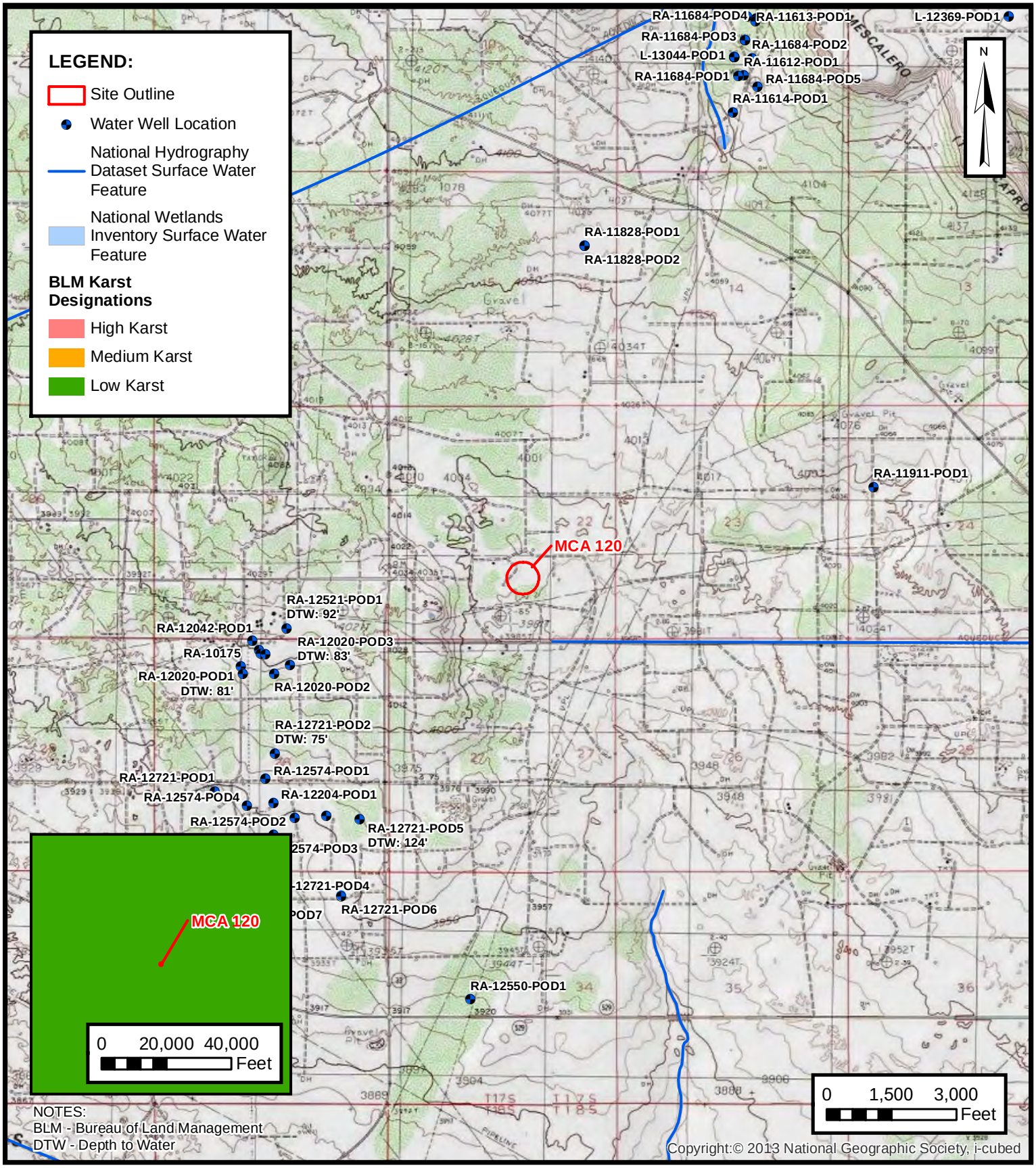
FIGURES



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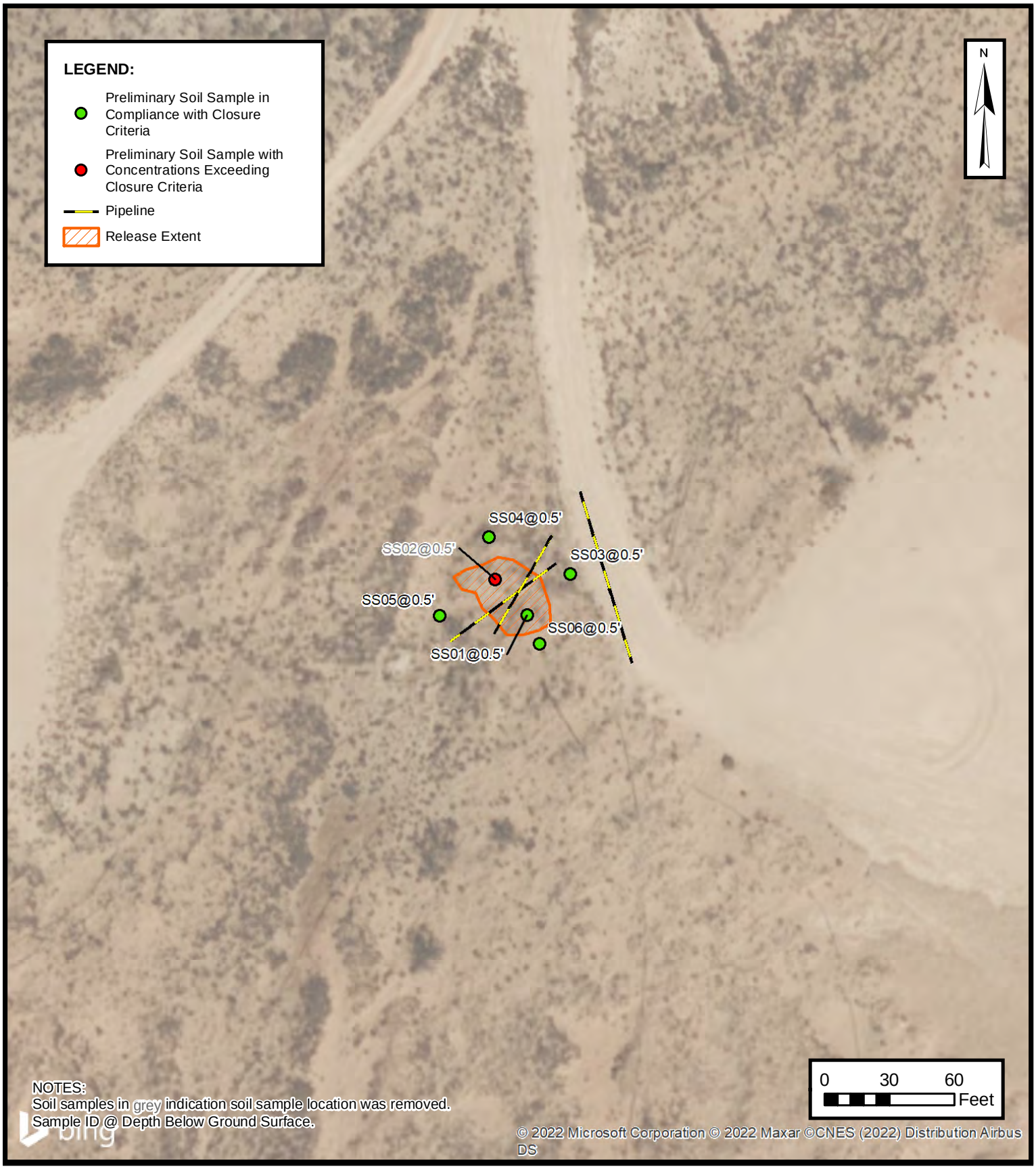
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

MAVERICK NATURAL RESOURCES, LLC
MCA 120
NAPP2209531688
Unit O, Sec 22, T17S, R32E
Lea County, New Mexico

FIGURE
1



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Environmental, Engineering and Hydrogeologic Consultants

PRELIMINARY SOIL SAMPLE LOCATIONS

MAVERICK NATURAL RESOURCES, LLC
MCA 120
NAPP2209531688
Unit O, Sec 22, T17S, R32E
Lea County, New Mexico

FIGURE
2

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EXCAVATION SOIL SAMPLE LOCATIONS

MAVERICK PERMIAN LLC
MCA 120
NAPP2209531688
Unit O, Sec 22, T17S, R32E
Lea County, New Mexico

FIGURE
3

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TABLE

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MCA 120
Maverick Natural Resources, LLC
Lea County, New Mexico

Sample Designation	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Preliminary Assessment Soil Samples										
SS01*	7/20/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	50.0
SS02*	7/20/2022	0.5	<0.00200	<0.00401	<49.9	**110**	<49.9	110	**110**	75.5
SS03*	7/20/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	11.5
SS04*	7/20/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	18.1
SS05*	7/20/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	19.3
SS06*	7/20/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	9.49
Excavation Soil Sample										
FS01*	08/24/2022	0.5	<0.00199	<0.00398	<49.9	318	<49.9	318	**318**	105
FS01A*	09/08/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	235

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
** - indicates sample was collected in area to be reclaimed after remediation is complete; the reclamation criteria applies to these samples*
*Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.*
Grey text represents samples that have been excavated

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APPENDIX A

Final C141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 04/05/2022

L48 Spill Volume Estimate Form

Facility Name & Number:	MCA well 120
Asset Area:	Maljamar
Release Discovery Date & Time:	03/22/2022 01:20PM
Release Type:	Oil Mixture
Provide any known details about the event:	flow line just started to leak from Collar/ Threads, No fluid needed to be picked-up, isloated flow line, last time I drove by 3B header was on 03/18/22 @ 1:00pm, Off pad and it rained

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	8.0	3.0	1.00	11.67%	0.356	0.042	20.00%	0.008	0.033
Rectangle B					0.000	0.000		0.000	0.000
Rectangle C					0.000	0.000		0.000	0.000
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
Rectangle J					0.000	0.000		0.000	0.000
					Total Volume Release:	0.042		0.008	0.033

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 95967

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 95967
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	4/5/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2209531688
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?	51-100 feet bgs
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2209531688
District RP	
Facility ID	
Application ID	

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

Printed Name: Bryce Wagoner Title: HSE Specialist

Signature: Date: 9/16/2022

email: bryce.wagner@mavresouces.com Telephone: 928-241-1862

OCD Only

Received by: Jocelyn Harimon Date: 09/16/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2209531688
District RP	
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Bryce Wagoner Title: HSE Specialist

Signature: Date: 9/16/2022

email: bryce.wagoner@mavresources.com Telephone: 928-241-1862

OCD Only

Received by: Jocelyn Harimon Date: 09/16/2022

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Jennifer Nobui Date: 09/21/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

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APPENDIX B

Referenced Well Records

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 12521 POD1	3	3	4	21	17S	32E	615127	3631271

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

Driller Name: WHITE, JOHN W

Drill Start Date: 07/21/2017 **Drill Finish Date:** 07/26/2017 **Plug Date:**

Log File Date: 08/22/2017 **PCW Rcv Date:** **Source:** Shallow

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

Casing Size: 2.00 **Depth Well:** 105 feet **Depth Water:** 92 feet

Water Bearing Stratifications:	Top	Bottom	Description
	85	101	Sandstone/Gravel/Conglomerate
	101	105	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	75	105

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APPENDIX C

Photographic Log

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Photographic Log
Maverick Natural Resources, LLC
MCA 120
NAPP2209531688

Photograph 1 Date: 7/20/2022

Description: View of the release area during the initial Site visit

Photograph 2 Date: 7/20/2022

Description: View of the release area during the initial site visit

Photograph 3 Date: 8/24/2022

Description: View of the release area during remediation

Photograph 4 Date: 8/24/2022

Description: View of the release area during remediation

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APPENDIX D

Laboratory Analytical Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-17247-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: MCA 120

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/2/2022 3:38:17 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 120

Laboratory Job ID: 880-17247-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

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
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 120

Job ID: 880-17247-1
SDG: Lea County NM

Job ID: 880-17247-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-17247-1

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 1.5°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30668 and analytical batch 880-30958 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-30668/2-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-30668 and analytical batch 880-30958 recovered outside control limits for the following analytes: Toluene, Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total.

Method 8021B: LCSD biased low. Since only an acceptable LCS is required per the method, the data has been qualified and reported. (LCSD 880-30668/2-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30596 and analytical batch 880-30958 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30658 and analytical batch 880-30649 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: Surrogate recovery for the following samples were outside control limits: (890-2603-A-1-F), (890-2603-A-1-G MS) and (890-2603-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS02 (880-17247-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-30624 and analytical batch 880-30643 contained Gasoline Range Organics (GRO)-C6-C10, Diesel Range Organics (Over C10-C28) and OII Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-30624 and analytical batch 880-30643 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Case Narrative

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Job ID: 880-17247-1 (Continued)

Laboratory: Eurofins Midland (Continued)

Client Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Client Sample ID: SS01

Date Collected: 07/20/22 10:35
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17247-1
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		07/26/22 10:46	07/29/22 13:04	1
Toluene	<0.00201	U *1	0.00201		mg/Kg		07/26/22 10:46	07/29/22 13:04	1
Ethylbenzene	<0.00201	U *- F1 *1	0.00201		mg/Kg		07/26/22 10:46	07/29/22 13:04	1
m-Xylene & p-Xylene	<0.00402	U *- F1 *1	0.00402		mg/Kg		07/26/22 10:46	07/29/22 13:04	1
o-Xylene	<0.00201	U *- F1 *1	0.00201		mg/Kg		07/26/22 10:46	07/29/22 13:04	1
Xylenes, Total	<0.00402	U *- F1 *1	0.00402		mg/Kg		07/26/22 10:46	07/29/22 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*07/26/22 10:46*	*07/29/22 13:04*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/26/22 10:46*	*07/29/22 13:04*	*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			07/29/22 15:20	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			07/27/22 09:04	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		07/25/22 16:28	07/26/22 18:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 18:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*07/25/22 16:28*	*07/26/22 18:14*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/25/22 16:28*	*07/26/22 18:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.0**		5.00		mg/Kg			07/26/22 19:51	1

Client Sample ID: SS02

Date Collected: 07/20/22 10:37
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17247-2
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		07/26/22 10:46	07/29/22 19:41	1
Toluene	**0.00205**	***1**	0.00200		mg/Kg		07/26/22 10:46	07/29/22 19:41	1
Ethylbenzene	<0.00200	U *- *1	0.00200		mg/Kg		07/26/22 10:46	07/29/22 19:41	1
m-Xylene & p-Xylene	<0.00401	U *- *1	0.00401		mg/Kg		07/26/22 10:46	07/29/22 19:41	1
o-Xylene	<0.00200	U *- *1	0.00200		mg/Kg		07/26/22 10:46	07/29/22 19:41	1
Xylenes, Total	<0.00401	U *- *1	0.00401		mg/Kg		07/26/22 10:46	07/29/22 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/26/22 10:46*	*07/29/22 19:41*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Client Sample ID: SS02

Date Collected: 07/20/22 10:37
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17247-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*07/26/22 10:46*	*07/29/22 19:41*	*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			07/29/22 15:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**110**		49.9	mg/Kg			07/27/22 09:04	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 16:28	07/26/22 18:36	1
Diesel Range Organics (Over C10-C28)	**110**		49.9	mg/Kg		07/25/22 16:28	07/26/22 18:36	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/25/22 16:28	07/26/22 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*63*	*S1-*	*70 - 130*	*07/25/22 16:28*	*07/26/22 18:36*	*1*
o-Terphenyl	*56*	*S1-*	*70 - 130*	*07/25/22 16:28*	*07/26/22 18:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.5**		4.99	mg/Kg			07/26/22 20:00	1

Client Sample ID: SS03

Date Collected: 07/20/22 10:41
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17247-3

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		07/26/22 10:46	07/29/22 20:02	1
Toluene	<0.00201	U *1	0.00201	mg/Kg		07/26/22 10:46	07/29/22 20:02	1
Ethylbenzene	<0.00201	U *- *1	0.00201	mg/Kg		07/26/22 10:46	07/29/22 20:02	1
m-Xylene & p-Xylene	<0.00402	U *- *1	0.00402	mg/Kg		07/26/22 10:46	07/29/22 20:02	1
o-Xylene	<0.00201	U *- *1	0.00201	mg/Kg		07/26/22 10:46	07/29/22 20:02	1
Xylenes, Total	<0.00402	U *- *1	0.00402	mg/Kg		07/26/22 10:46	07/29/22 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*07/26/22 10:46*	*07/29/22 20:02*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*07/26/22 10:46*	*07/29/22 20:02*	*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			07/29/22 15:20	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			07/27/22 09:04	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Client Sample ID: SS03

Lab Sample ID: 880-17247-3
Matrix: Solid
Date Collected: 07/20/22 10:41
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	<49.8	U	49.8		mg/Kg		07/25/22 16:28	07/26/22 18:58	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/25/22 16:28	07/26/22 18:58	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/25/22 16:28	07/26/22 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/25/22 16:28*	*07/26/22 18:58*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/25/22 16:28*	*07/26/22 18:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.5**		4.98		mg/Kg			07/26/22 20:09	1

Client Sample ID: SS04

Lab Sample ID: 880-17247-4
Matrix: Solid
Date Collected: 07/20/22 10:43
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	<0.00200	U	0.00200		mg/Kg		07/26/22 10:46	07/29/22 20:23	1
Toluene	<0.00200	U *1	0.00200		mg/Kg		07/26/22 10:46	07/29/22 20:23	1
Ethylbenzene	<0.00200	U *- *1	0.00200		mg/Kg		07/26/22 10:46	07/29/22 20:23	1
m-Xylene & p-Xylene	<0.00399	U *- *1	0.00399		mg/Kg		07/26/22 10:46	07/29/22 20:23	1
o-Xylene	<0.00200	U *- *1	0.00200		mg/Kg		07/26/22 10:46	07/29/22 20:23	1
Xylenes, Total	<0.00399	U *- *1	0.00399		mg/Kg		07/26/22 10:46	07/29/22 20:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/26/22 10:46*	*07/29/22 20:23*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/26/22 10:46*	*07/29/22 20:23*	*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			07/29/22 15:20	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			07/27/22 09:04	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		07/25/22 16:28	07/26/22 19:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 19:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*07/25/22 16:28*	*07/26/22 19:20*	*1*
o-Terphenyl	*78*		*70 - 130*	*07/25/22 16:28*	*07/26/22 19:20*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Client Sample ID: SS04

Lab Sample ID: 880-17247-4
Matrix: Solid
Date Collected: 07/20/22 10:43
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.1		4.95		mg/Kg			07/26/22 20:19	1

Client Sample ID: SS05

Lab Sample ID: 880-17247-5
Matrix: Solid
Date Collected: 07/20/22 10:47
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		mg/Kg		07/26/22 10:46	07/29/22 20:43	1
Toluene	<0.00199	U *1	0.00199		mg/Kg		07/26/22 10:46	07/29/22 20:43	1
Ethylbenzene	<0.00199	U *- *1	0.00199		mg/Kg		07/26/22 10:46	07/29/22 20:43	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398		mg/Kg		07/26/22 10:46	07/29/22 20:43	1
o-Xylene	<0.00199	U *- *1	0.00199		mg/Kg		07/26/22 10:46	07/29/22 20:43	1
Xylenes, Total	<0.00398	U *- *1	0.00398		mg/Kg		07/26/22 10:46	07/29/22 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/26/22 10:46*	*07/29/22 20:43*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*07/26/22 10:46*	*07/29/22 20:43*	*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			07/29/22 15:20	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			07/27/22 09:04	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		07/25/22 16:28	07/26/22 19:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 19:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*07/25/22 16:28*	*07/26/22 19:42*	*1*
o-Terphenyl	*105*		*70 - 130*	*07/25/22 16:28*	*07/26/22 19:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.3		4.95		mg/Kg			07/26/22 20:28	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Client Sample ID: SS06

Date Collected: 07/20/22 10:50
Date Received: 07/21/22 15:26
Sample Depth: 0.5

Lab Sample ID: 880-17247-6

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/29/22 14:53	08/02/22 13:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/29/22 14:53	08/02/22 13:02	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/29/22 14:53	08/02/22 13:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/29/22 14:53	08/02/22 13:02	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/29/22 14:53	08/02/22 13:02	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/29/22 14:53	08/02/22 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/29/22 14:53*	*08/02/22 13:02*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/29/22 14:53*	*08/02/22 13:02*	*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			07/29/22 15:20	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			07/27/22 09:04	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		07/26/22 08:36	07/26/22 19:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 08:36	07/26/22 19:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 08:36	07/26/22 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*07/26/22 08:36*	*07/26/22 19:43*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/26/22 08:36*	*07/26/22 19:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.49**		4.98		mg/Kg			07/26/22 20:56	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-17204-A-79-C MS	Matrix Spike	88	111
880-17204-A-79-D MSD	Matrix Spike Duplicate	87	110
880-17247-1	SS01	86	115
880-17247-1 MS	SS01	86	110
880-17247-1 MSD	SS01	88	109
880-17247-2	SS02	94	114
880-17247-3	SS03	97	118
880-17247-4	SS04	90	115
880-17247-5	SS05	95	118
880-17247-6	SS06	101	97
880-17512-A-1-D MS	Matrix Spike	280 S1+	77
880-17512-A-1-E MSD	Matrix Spike Duplicate	35 S1-	87
LCS 880-30596/1-A	Lab Control Sample	85	108
LCS 880-30668/1-A	Lab Control Sample	82	110
LCS 880-31023/1-A	Lab Control Sample	70	102
LCSD 880-30596/2-A	Lab Control Sample Dup	84	108
LCSD 880-30668/2-A	Lab Control Sample Dup	56 S1-	126
LCSD 880-31023/2-A	Lab Control Sample Dup	104	109
MB 880-30596/5-A	Method Blank	83	107
MB 880-30668/5-A	Method Blank	83	107
MB 880-31023/5-A	Method Blank	78	93
MB 880-31030/5-A	Method Blank	73	97

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17247-1	SS01	86	94
880-17247-2	SS02	63 S1-	56 S1-
880-17247-3	SS03	96	101
880-17247-4	SS04	76	78
880-17247-5	SS05	99	105
880-17247-6	SS06	76	94
890-2603-A-1-G MS	Matrix Spike	77	67 S1-
890-2603-A-1-H MSD	Matrix Spike Duplicate	66 S1-	56 S1-
890-2606-A-1-D MS	Matrix Spike	70	70
890-2606-A-1-E MSD	Matrix Spike Duplicate	71	73
LCS 880-30624/2-A	Lab Control Sample	113	109
LCS 880-30658/2-A	Lab Control Sample	106	111
LCSD 880-30624/3-A	Lab Control Sample Dup	101	101
LCSD 880-30658/3-A	Lab Control Sample Dup	94	101
MB 880-30624/1-A	Method Blank	82	87
MB 880-30658/1-A	Method Blank	74	83

Surrogate Legend

Surrogate Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30596/5-A
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30596

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/25/22 14:08	07/29/22 23:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/25/22 14:08	07/29/22 23:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/25/22 14:08	07/29/22 23:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/25/22 14:08	07/29/22 23:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/25/22 14:08	07/29/22 23:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/25/22 14:08	07/29/22 23:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/25/22 14:08*	*07/29/22 23:50*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/25/22 14:08*	*07/29/22 23:50*	*1*

Lab Sample ID: LCS 880-30596/1-A
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30596

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1121		mg/Kg		112	70 - 130		
Toluene			0.100	0.09289		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.08843		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1717		mg/Kg		86	70 - 130		
o-Xylene			0.100	0.08588		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-30596/2-A
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30596

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1128		mg/Kg		113	70 - 130	1	35
Toluene			0.100	0.09219		mg/Kg		92	70 - 130	1	35
Ethylbenzene			0.100	0.08800		mg/Kg		88	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.1710		mg/Kg		86	70 - 130	0	35
o-Xylene			0.100	0.08542		mg/Kg		85	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 880-30668/5-A
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30668

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:46	07/29/22 12:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:46	07/29/22 12:42	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-30668/5-A
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30668

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:46	07/29/22 12:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/26/22 10:46	07/29/22 12:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/22 10:46	07/29/22 12:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/26/22 10:46	07/29/22 12:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/26/22 10:46*	*07/29/22 12:42*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/26/22 10:46*	*07/29/22 12:42*	*1*

Lab Sample ID: LCS 880-30668/1-A
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30668

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1249		mg/Kg		125	70 - 130		
Toluene			0.100	0.1035		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.1007		mg/Kg		101	70 - 130		
m-Xylene & p-Xylene			0.200	0.1926		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09308		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-30668/2-A
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30668

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1202		mg/Kg		120	70 - 130	4	35
Toluene			0.100	0.07106	*1	mg/Kg		71	70 - 130	37	35
Ethylbenzene			0.100	0.06468	*- *1	mg/Kg		65	70 - 130	44	35
m-Xylene & p-Xylene			0.200	0.1112	*- *1	mg/Kg		56	70 - 130	54	35
o-Xylene			0.100	0.05417	*- *1	mg/Kg		54	70 - 130	53	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*56*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*

Lab Sample ID: 880-17247-1 MS
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30668

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0996	0.1114		mg/Kg		112	70 - 130		
Toluene	<0.00201	U *1	0.0996	0.07654		mg/Kg		77	70 - 130		
Ethylbenzene	<0.00201	U *- F1 *1	0.0996	0.05750	F1	mg/Kg		58	70 - 130		
m-Xylene & p-Xylene	<0.00402	U *- F1 *1	0.199	0.08803	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

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

Lab Sample ID: 880-17247-1 MS
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30668

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	<0.00201	U *- F1 *1	0.0996	0.06393	F1	mg/Kg		64	70 - 130

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

Lab Sample ID: 880-17247-1 MSD
Matrix: Solid
Analysis Batch: 30958

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30668

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.1060		mg/Kg		106	70 - 130	5	35
Toluene	<0.00201	U *1	0.100	0.07556		mg/Kg		75	70 - 130	1	35
Ethylbenzene	<0.00201	U *- F1 *1	0.100	0.05625	F1	mg/Kg		56	70 - 130	2	35
m-Xylene & p-Xylene	<0.00402	U *- F1 *1	0.200	0.08627	F1	mg/Kg		43	70 - 130	2	35
o-Xylene	<0.00201	U *- F1 *1	0.100	0.06458	F1	mg/Kg		64	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: MB 880-31023/5-A
Matrix: Solid
Analysis Batch: 31193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31023

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 14:53	08/02/22 06:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 14:53	08/02/22 06:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 14:53	08/02/22 06:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 14:53	08/02/22 06:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 14:53	08/02/22 06:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 14:53	08/02/22 06:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*07/29/22 14:53*	*08/02/22 06:34*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*07/29/22 14:53*	*08/02/22 06:34*	*1*

Lab Sample ID: LCS 880-31023/1-A
Matrix: Solid
Analysis Batch: 31193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31023

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09121		mg/Kg		91	70 - 130
Toluene	0.100	0.08538		mg/Kg		85	70 - 130
Ethylbenzene	0.100	0.08659		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	0.200	0.1757		mg/Kg		88	70 - 130
o-Xylene	0.100	0.09078		mg/Kg		91	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-31023/1-A
Matrix: Solid
Analysis Batch: 31193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31023

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

Lab Sample ID: LCSD 880-31023/2-A
Matrix: Solid
Analysis Batch: 31193

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31023

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1074		mg/Kg		107	70 - 130	16	35
Toluene			0.100	0.09979		mg/Kg		100	70 - 130	16	35
Ethylbenzene			0.100	0.1017		mg/Kg		102	70 - 130	16	35
m-Xylene & p-Xylene			0.200	0.2063		mg/Kg		103	70 - 130	16	35
o-Xylene			0.100	0.1125		mg/Kg		113	70 - 130	21	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: MB 880-31030/5-A
Matrix: Solid
Analysis Batch: 31193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31030

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 15:39	08/01/22 17:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 15:39	08/01/22 17:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 15:39	08/01/22 17:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 15:39	08/01/22 17:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 15:39	08/01/22 17:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 15:39	08/01/22 17:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130	07/29/22 15:39	08/01/22 17:07	1
1,4-Difluorobenzene (Surr)	97		70 - 130	07/29/22 15:39	08/01/22 17:07	1

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

Lab Sample ID: MB 880-30624/1-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30624

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 16:28	07/26/22 09:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 09:44	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/25/22 16:28	07/26/22 09:44	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-30624/1-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30624

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	07/25/22 16:28	07/26/22 09:44	1
o-Terphenyl	87		70 - 130	07/25/22 16:28	07/26/22 09:44	1

Lab Sample ID: LCS 880-30624/2-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30624

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	922.1		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1096		mg/Kg		110	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-30624/3-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30624

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	836.9		mg/Kg		84	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	975.9		mg/Kg		98	70 - 130	12	20

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

Lab Sample ID: MB 880-30658/1-A
Matrix: Solid
Analysis Batch: 30649

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30658

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		07/26/22 08:35	07/26/22 10:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 08:35	07/26/22 10:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 08:35	07/26/22 10:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130	07/26/22 08:35	07/26/22 10:49	1
o-Terphenyl	83		70 - 130	07/26/22 08:35	07/26/22 10:49	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-30658/2-A
Matrix: Solid
Analysis Batch: 30649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1058		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1146		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

Lab Sample ID: LCSD 880-30658/3-A
Matrix: Solid
Analysis Batch: 30649

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1120		mg/Kg		112	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	1009		mg/Kg		101	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30598/1-A
Matrix: Solid
Analysis Batch: 30688

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			07/26/22 17:23	1

Lab Sample ID: LCS 880-30598/2-A
Matrix: Solid
Analysis Batch: 30688

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	257.9		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-30598/3-A
Matrix: Solid
Analysis Batch: 30688

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	259.0		mg/Kg		104	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-17247-5 MS
Matrix: Solid
Analysis Batch: 30688

Client Sample ID: SS05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	19.3		248	284.3		mg/Kg		107	90 - 110		

Lab Sample ID: 880-17247-5 MSD
Matrix: Solid
Analysis Batch: 30688

Client Sample ID: SS05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	19.3		248	284.8		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

GC VOA

Prep Batch: 30596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30596/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30596/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30596/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 30668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Total/NA	Solid	5035	
880-17247-2	SS02	Total/NA	Solid	5035	
880-17247-3	SS03	Total/NA	Solid	5035	
880-17247-4	SS04	Total/NA	Solid	5035	
880-17247-5	SS05	Total/NA	Solid	5035	
MB 880-30668/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30668/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30668/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17247-1 MS	SS01	Total/NA	Solid	5035	
880-17247-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 30958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Total/NA	Solid	8021B	30668
880-17247-2	SS02	Total/NA	Solid	8021B	30668
880-17247-3	SS03	Total/NA	Solid	8021B	30668
880-17247-4	SS04	Total/NA	Solid	8021B	30668
880-17247-5	SS05	Total/NA	Solid	8021B	30668
MB 880-30596/5-A	Method Blank	Total/NA	Solid	8021B	30596
MB 880-30668/5-A	Method Blank	Total/NA	Solid	8021B	30668
LCS 880-30596/1-A	Lab Control Sample	Total/NA	Solid	8021B	30596
LCS 880-30668/1-A	Lab Control Sample	Total/NA	Solid	8021B	30668
LCSD 880-30596/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30596
LCSD 880-30668/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30668
880-17247-1 MS	SS01	Total/NA	Solid	8021B	30668
880-17247-1 MSD	SS01	Total/NA	Solid	8021B	30668

Prep Batch: 31023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-6	SS06	Total/NA	Solid	5035	
MB 880-31023/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31023/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31023/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 31026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Total/NA	Solid	Total BTEX	
880-17247-2	SS02	Total/NA	Solid	Total BTEX	
880-17247-3	SS03	Total/NA	Solid	Total BTEX	
880-17247-4	SS04	Total/NA	Solid	Total BTEX	
880-17247-5	SS05	Total/NA	Solid	Total BTEX	
880-17247-6	SS06	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

GC VOA

Prep Batch: 31030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31030/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 31193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-6	SS06	Total/NA	Solid	8021B	31023
MB 880-31023/5-A	Method Blank	Total/NA	Solid	8021B	31023
MB 880-31030/5-A	Method Blank	Total/NA	Solid	8021B	31030
LCS 880-31023/1-A	Lab Control Sample	Total/NA	Solid	8021B	31023
LCSD 880-31023/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31023

GC Semi VOA

Prep Batch: 30624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Total/NA	Solid	8015NM Prep	
880-17247-2	SS02	Total/NA	Solid	8015NM Prep	
880-17247-3	SS03	Total/NA	Solid	8015NM Prep	
880-17247-4	SS04	Total/NA	Solid	8015NM Prep	
880-17247-5	SS05	Total/NA	Solid	8015NM Prep	
MB 880-30624/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30624/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30624/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Total/NA	Solid	8015B NM	30624
880-17247-2	SS02	Total/NA	Solid	8015B NM	30624
880-17247-3	SS03	Total/NA	Solid	8015B NM	30624
880-17247-4	SS04	Total/NA	Solid	8015B NM	30624
880-17247-5	SS05	Total/NA	Solid	8015B NM	30624
MB 880-30624/1-A	Method Blank	Total/NA	Solid	8015B NM	30624
LCS 880-30624/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30624
LCSD 880-30624/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30624

Analysis Batch: 30649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-6	SS06	Total/NA	Solid	8015B NM	30658
MB 880-30658/1-A	Method Blank	Total/NA	Solid	8015B NM	30658
LCS 880-30658/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30658
LCSD 880-30658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30658

Prep Batch: 30658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-6	SS06	Total/NA	Solid	8015NM Prep	
MB 880-30658/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30658/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

GC Semi VOA (Continued)

Analysis Batch: 30773 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-2	SS02	Total/NA	Solid	8015 NM	
880-17247-3	SS03	Total/NA	Solid	8015 NM	
880-17247-4	SS04	Total/NA	Solid	8015 NM	
880-17247-5	SS05	Total/NA	Solid	8015 NM	
880-17247-6	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Soluble	Solid	DI Leach	
880-17247-2	SS02	Soluble	Solid	DI Leach	
880-17247-3	SS03	Soluble	Solid	DI Leach	
880-17247-4	SS04	Soluble	Solid	DI Leach	
880-17247-5	SS05	Soluble	Solid	DI Leach	
880-17247-6	SS06	Soluble	Solid	DI Leach	
MB 880-30598/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30598/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30598/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17247-5 MS	SS05	Soluble	Solid	DI Leach	
880-17247-5 MSD	SS05	Soluble	Solid	DI Leach	

Analysis Batch: 30688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17247-1	SS01	Soluble	Solid	300.0	30598
880-17247-2	SS02	Soluble	Solid	300.0	30598
880-17247-3	SS03	Soluble	Solid	300.0	30598
880-17247-4	SS04	Soluble	Solid	300.0	30598
880-17247-5	SS05	Soluble	Solid	300.0	30598
880-17247-6	SS06	Soluble	Solid	300.0	30598
MB 880-30598/1-A	Method Blank	Soluble	Solid	300.0	30598
LCS 880-30598/2-A	Lab Control Sample	Soluble	Solid	300.0	30598
LCSD 880-30598/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30598
880-17247-5 MS	SS05	Soluble	Solid	300.0	30598
880-17247-5 MSD	SS05	Soluble	Solid	300.0	30598

Lab Chronicle

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Client Sample ID: SS01
Date Collected: 07/20/22 10:35
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17247-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30668	07/26/22 10:46	MR	XEN MID
Total/NA	Analysis	8021B		1	30958	07/29/22 13:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	31026	07/29/22 15:20	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30773	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 18:14	AJ	XEN MID
Soluble	Leach	DI Leach			30598	07/25/22 15:14	KS	XEN MID
Soluble	Analysis	300.0		1	30688	07/26/22 19:51	CH	XEN MID

Client Sample ID: SS02
Date Collected: 07/20/22 10:37
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17247-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30668	07/26/22 10:46	MR	XEN MID
Total/NA	Analysis	8021B		1	30958	07/29/22 19:41	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	31026	07/29/22 15:20	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30773	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 18:36	AJ	XEN MID
Soluble	Leach	DI Leach			30598	07/25/22 15:14	KS	XEN MID
Soluble	Analysis	300.0		1	30688	07/26/22 20:00	CH	XEN MID

Client Sample ID: SS03
Date Collected: 07/20/22 10:41
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17247-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30668	07/26/22 10:46	MR	XEN MID
Total/NA	Analysis	8021B		1	30958	07/29/22 20:02	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	31026	07/29/22 15:20	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30773	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 18:58	AJ	XEN MID
Soluble	Leach	DI Leach			30598	07/25/22 15:14	KS	XEN MID
Soluble	Analysis	300.0		1	30688	07/26/22 20:09	CH	XEN MID

Client Sample ID: SS04
Date Collected: 07/20/22 10:43
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17247-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30668	07/26/22 10:46	MR	XEN MID
Total/NA	Analysis	8021B		1	30958	07/29/22 20:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	31026	07/29/22 15:20	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

Client Sample ID: SS04
Date Collected: 07/20/22 10:43
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17247-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	30773	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 19:20	AJ	XEN MID
Soluble	Leach	DI Leach			30598	07/25/22 15:14	KS	XEN MID
Soluble	Analysis	300.0		1	30688	07/26/22 20:19	CH	XEN MID

Client Sample ID: SS05
Date Collected: 07/20/22 10:47
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17247-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			30668	07/26/22 10:46	MR	XEN MID
Total/NA	Analysis	8021B		1	30958	07/29/22 20:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	31026	07/29/22 15:20	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30773	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30624	07/25/22 16:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30643	07/26/22 19:42	AJ	XEN MID
Soluble	Leach	DI Leach			30598	07/25/22 15:14	KS	XEN MID
Soluble	Analysis	300.0		1	30688	07/26/22 20:28	CH	XEN MID

Client Sample ID: SS06
Date Collected: 07/20/22 10:50
Date Received: 07/21/22 15:26

Lab Sample ID: 880-17247-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			31023	07/29/22 14:53	MR	XEN MID
Total/NA	Analysis	8021B		1	31193	08/02/22 13:02	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	31026	07/29/22 15:20	SM	XEN MID
Total/NA	Analysis	8015 NM		1	30773	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			30658	07/26/22 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1	30649	07/26/22 19:43	AJ	XEN MID
Soluble	Leach	DI Leach			30598	07/25/22 15:14	KS	XEN MID
Soluble	Analysis	300.0		1	30688	07/26/22 20:56	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 120

Job ID: 880-17247-1
SDG: Lea County NM

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 880-17247-1
SDG: Lea County NM

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 120

Job ID: 880-17247-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-17247-1	SS01	Solid	07/20/22 10:35	07/21/22 15:26	0.5
880-17247-2	SS02	Solid	07/20/22 10:37	07/21/22 15:26	0.5
880-17247-3	SS03	Solid	07/20/22 10:41	07/21/22 15:26	0.5
880-17247-4	SS04	Solid	07/20/22 10:43	07/21/22 15:26	0.5
880-17247-5	SS05	Solid	07/20/22 10:47	07/21/22 15:26	0.5
880-17247-6	SS06	Solid	07/20/22 10:50	07/21/22 15:26	0.5

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Chain of Custody

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

Work Order No: 17247

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 120	Turn Around	
Project Number:	03D2057019	☒ Routine ☐ Rush	
Project Location.	LEA COUNTY, NM	Due Date	5 DAY
Sampler's Name	HADLIE GREEN	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:	IR8	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	+.2	
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_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: BTEX 8021	TPH 8015	Chlorides 300	Sample Comments
SS01	SC	7-20-22	1035	0.5	G	1		X	X	X	
SS02			1037								
SS03			1041								
SS04			1043								
SS05			1047								
SS06			1050								

880-17247 Chain of Custody

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: 880-17247-1
SDG Number: Lea County NM

Login Number: 17247
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 Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2837-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: MCA 120

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
9/7/2022 3:58:17 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 120

Laboratory Job ID: 890-2837-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 120

Job ID: 890-2837-1
SDG: Lea County NM

Job ID: 890-2837-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2837-1

Receipt
The sample was received on 8/24/2022 4:27 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°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
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 880-33075 and analytical batch 880-33438 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 120

Job ID: 890-2837-1
SDG: Lea County NM

Client Sample ID: FS01

Date Collected: 08/24/22 14:30
Date Received: 08/24/22 16:27
Sample Depth: 0.5'

Lab Sample ID: 890-2837-1

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		09/02/22 16:09	09/06/22 16:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:09	09/06/22 16:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:09	09/06/22 16:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/02/22 16:09	09/06/22 16:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/02/22 16:09	09/06/22 16:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/02/22 16:09	09/06/22 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*09/02/22 16:09*	*09/06/22 16:53*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/02/22 16:09*	*09/06/22 16:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/07/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**318**		49.9		mg/Kg			08/29/22 11:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 15:45	08/29/22 01:51	1
Diesel Range Organics (Over C10-C28)	**318**		49.9		mg/Kg		08/26/22 15:45	08/29/22 01:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/22 15:45	08/29/22 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*08/26/22 15:45*	*08/29/22 01:51*	*1*
o-Terphenyl	*90*		*70 - 130*	*08/26/22 15:45*	*08/29/22 01:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**105**		4.95		mg/Kg			09/01/22 12:50	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
820-5532-A-1-B MS	Matrix Spike	123	96
820-5532-A-1-C MSD	Matrix Spike Duplicate	289 S1+	263 S1+
890-2837-1	FS01	123	92
LCS 880-33665/1-A	Lab Control Sample	126	96
LCSD 880-33665/2-A	Lab Control Sample Dup	118	100
MB 880-33665/5-A	Method Blank	101	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)
890-2837-1	FS01	97	90
890-2838-A-1-C MS	Matrix Spike	92	81
890-2838-A-1-D MSD	Matrix Spike Duplicate	88	75
LCS 880-33085/2-A	Lab Control Sample	95	111
LCSD 880-33085/3-A	Lab Control Sample Dup	93	107
MB 880-33085/1-A	Method Blank	98	107

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33665/5-A
Matrix: Solid
Analysis Batch: 33800

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33665

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:09	09/06/22 12:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:09	09/06/22 12:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:09	09/06/22 12:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/02/22 16:09	09/06/22 12:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 16:09	09/06/22 12:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/02/22 16:09	09/06/22 12:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/02/22 16:09*	*09/06/22 12:05*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*09/02/22 16:09*	*09/06/22 12:05*	*1*

Lab Sample ID: LCS 880-33665/1-A
Matrix: Solid
Analysis Batch: 33800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33665

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08711		mg/Kg		87	70 - 130		
Toluene			0.100	0.08943		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.09716		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.2159		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1238		mg/Kg		124	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-33665/2-A
Matrix: Solid
Analysis Batch: 33800

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33665

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08487		mg/Kg		85	70 - 130	3	35
Toluene			0.100	0.07853		mg/Kg		79	70 - 130	13	35
Ethylbenzene			0.100	0.08168		mg/Kg		82	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.1695		mg/Kg		85	70 - 130	24	35
o-Xylene			0.100	0.09698		mg/Kg		97	70 - 130	24	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 820-5532-A-1-B MS
Matrix: Solid
Analysis Batch: 33800

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33665

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F2 F1	0.0998	0.09790		mg/Kg		98	70 - 130		
Toluene	<0.00201	U F2 F1	0.0998	0.1016		mg/Kg		102	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

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

Lab Sample ID: 820-5532-A-1-B MS
Matrix: Solid
Analysis Batch: 33800

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33665

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F2 F1	0.0998	0.1080		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.200	0.2384		mg/Kg		119	70 - 130
o-Xylene	<0.00201	U F2 F1	0.0998	0.1367	F1	mg/Kg		137	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 820-5532-A-1-C MSD
Matrix: Solid
Analysis Batch: 33800

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33665

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F2 F1	0.100	0.1904	F1 F2	mg/Kg		190	70 - 130	64	35
Toluene	<0.00201	U F2 F1	0.100	0.1718	F1 F2	mg/Kg		171	70 - 130	51	35
Ethylbenzene	<0.00201	U F2 F1	0.100	0.1726	F1 F2	mg/Kg		172	70 - 130	46	35
m-Xylene & p-Xylene	<0.00402	U F2 F1	0.201	0.3550	F1 F2	mg/Kg		177	70 - 130	39	35
o-Xylene	<0.00201	U F2 F1	0.100	0.2080	F1 F2	mg/Kg		207	70 - 130	41	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*289*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*263*	*S1+*	*70 - 130*

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

Lab Sample ID: MB 880-33085/1-A
Matrix: Solid
Analysis Batch: 33129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33085

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/26/22 15:45	08/28/22 17:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/26/22 15:45	08/28/22 17:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/22 15:45	08/28/22 17:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*08/26/22 15:45*	*08/28/22 17:32*	*1*
o-Terphenyl	*107*		*70 - 130*	*08/26/22 15:45*	*08/28/22 17:32*	*1*

Lab Sample ID: LCS 880-33085/2-A
Matrix: Solid
Analysis Batch: 33129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33085

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	948.5		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	903.2		mg/Kg		90	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-33085/2-A
Matrix: Solid
Analysis Batch: 33129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33085

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

Lab Sample ID: LCSD 880-33085/3-A
Matrix: Solid
Analysis Batch: 33129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33085

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	982.2		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	933.2		mg/Kg		93	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 890-2838-A-1-C MS
Matrix: Solid
Analysis Batch: 33129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33085

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1001		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	907.4		mg/Kg		87	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Lab Sample ID: 890-2838-A-1-D MSD
Matrix: Solid
Analysis Batch: 33129

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33085

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	989.6		mg/Kg		98	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	858.7		mg/Kg		82	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33075/1-A
Matrix: Solid
Analysis Batch: 33438

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/01/22 09:56	1

Lab Sample ID: LCS 880-33075/2-A
Matrix: Solid
Analysis Batch: 33438

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	247.9		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-33075/3-A
Matrix: Solid
Analysis Batch: 33438

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	249.0		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-2830-A-1-C MS
Matrix: Solid
Analysis Batch: 33438

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	29.5	F1	250	305.8	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 890-2830-A-1-D MSD
Matrix: Solid
Analysis Batch: 33438

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	29.5	F1	250	303.7		mg/Kg		110	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

GC VOA

Prep Batch: 33665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Total/NA	Solid	5035	
MB 880-33665/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33665/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33665/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-5532-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
820-5532-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Total/NA	Solid	8021B	33665
MB 880-33665/5-A	Method Blank	Total/NA	Solid	8021B	33665
LCS 880-33665/1-A	Lab Control Sample	Total/NA	Solid	8021B	33665
LCSD 880-33665/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33665
820-5532-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	33665
820-5532-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33665

Analysis Batch: 33946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Total/NA	Solid	8015NM Prep	
MB 880-33085/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33085/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33085/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2838-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2838-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Total/NA	Solid	8015B NM	33085
MB 880-33085/1-A	Method Blank	Total/NA	Solid	8015B NM	33085
LCS 880-33085/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33085
LCSD 880-33085/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33085
890-2838-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33085
890-2838-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33085

Analysis Batch: 33215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Soluble	Solid	DI Leach	
MB 880-33075/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33075/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33075/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

HPLC/IC (Continued)

Leach Batch: 33075 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2830-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2830-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2837-1	FS01	Soluble	Solid	300.0	33075
MB 880-33075/1-A	Method Blank	Soluble	Solid	300.0	33075
LCS 880-33075/2-A	Lab Control Sample	Soluble	Solid	300.0	33075
LCSD 880-33075/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33075
890-2830-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	33075
890-2830-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33075

Lab Chronicle

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

Client Sample ID: FS01

Date Collected: 08/24/22 14:30
Date Received: 08/24/22 16:27

Lab Sample ID: 890-2837-1

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	33665	09/02/22 16:09	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33800	09/06/22 16:53	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33946	09/07/22 16:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			33215	08/29/22 11:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33085	08/26/22 15:45	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33129	08/29/22 01:51	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	33075	08/26/22 14:54	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33438	09/01/22 12:50	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2837-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2837-1	FS01	Solid	08/24/22 14:30	08/24/22 16:27	0.5'

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	MCA 120	Turn Around	
Project Number:	03D2057019	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	5 Day TAT
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm	
CC #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TMH-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.2	
Total Containers:		Corrected Temperature:	2.0	

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	8.24.22	14:30	0.5'	Comp	1		X	X	X

Parameters

890-2837 Chain of Custody

Preservative Codes

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

Sample Comments

Incident Numbers
NAPP2209531688

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8/24/22 1637	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2837-1
SDG Number: Lea County NM

Login Number: 2837
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2837-1
SDG Number: Lea County NM

Login Number: 2837
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 08/26/22 11:03 AM

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.	True	
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").	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2909-1
Laboratory Sample Delivery Group: 03D2057019
Client Project/Site: MCA 120
Revision: 1

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

Attn: Josh Adams

JKramer

Authorized for release by:
9/14/2022 9:38:11 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 120

Laboratory Job ID: 890-2909-1
SDG: 03D2057019

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

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
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 120

Job ID: 890-2909-1
SDG: 03D2057019

Job ID: 890-2909-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2909-1

REVISION

The report being provided is a revision of the original report sent on 9/13/2022. The report (revision 1) is being revised due to Per client email, requestin TPH re run.

Report revision history

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

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34295 and analytical batch 880-34173 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 120

Job ID: 890-2909-1
SDG: 03D2057019

Client Sample ID: FS01A
Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22
Sample Depth: 1

Lab Sample ID: 890-2909-1
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		09/12/22 13:31	09/12/22 22:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/22 13:31	09/12/22 22:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/22 13:31	09/12/22 22:18	1
m-Xylene & p-Xylene	<0.00399	U F1	0.00399		mg/Kg		09/12/22 13:31	09/12/22 22:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/22 13:31	09/12/22 22:18	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/12/22 13:31	09/12/22 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*09/12/22 13:31*	*09/12/22 22:18*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/12/22 13:31*	*09/12/22 22:18*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/13/22 08:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/12/22 15:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 17:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 17:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/13/22 08:23	09/13/22 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:25*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/13/22 08:23*	*09/13/22 17:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**235**		4.98		mg/Kg			09/12/22 14:50	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

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)
890-2909-1	FS01A	103	95
890-2909-1 MS	FS01A	117	108
890-2909-1 MSD	FS01A	122	110
LCS 880-34295/1-A	Lab Control Sample	116	109
LCSD 880-34295/2-A	Lab Control Sample Dup	110	107
MB 880-34213/5-A	Method Blank	96	86
MB 880-34295/5-A	Method Blank	93	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)
890-2909-1	FS01A	96	106
890-2914-A-1-D MS	Matrix Spike	91	87
890-2914-A-1-E MSD	Matrix Spike Duplicate	95	91
LCS 880-34341/2-A	Lab Control Sample	74	84
LCSD 880-34341/3-A	Lab Control Sample Dup	79	88
MB 880-34341/1-A	Method Blank	102	114

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34213/5-A
Matrix: Solid
Analysis Batch: 34173

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34213

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/22 09:23	09/12/22 10:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/22 09:23	09/12/22 10:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/22 09:23	09/12/22 10:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/12/22 09:23	09/12/22 10:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/22 09:23	09/12/22 10:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/12/22 09:23	09/12/22 10:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*09/12/22 09:23*	*09/12/22 10:47*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/12/22 09:23*	*09/12/22 10:47*	*1*

Lab Sample ID: MB 880-34295/5-A
Matrix: Solid
Analysis Batch: 34173

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34295

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/22 13:31	09/12/22 21:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/22 13:31	09/12/22 21:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/22 13:31	09/12/22 21:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/12/22 13:31	09/12/22 21:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/22 13:31	09/12/22 21:57	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/12/22 13:31	09/12/22 21:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/12/22 13:31*	*09/12/22 21:57*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/12/22 13:31*	*09/12/22 21:57*	*1*

Lab Sample ID: LCS 880-34295/1-A
Matrix: Solid
Analysis Batch: 34173

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34295

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08965		mg/Kg		90	70 - 130		
Toluene			0.100	0.07941		mg/Kg		79	70 - 130		
Ethylbenzene			0.100	0.08581		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene			0.200	0.1763		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.1027		mg/Kg		103	70 - 130		

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

Lab Sample ID: LCSD 880-34295/2-A
Matrix: Solid
Analysis Batch: 34173

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34295

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08509		mg/Kg		85	70 - 130	5	35

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

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

Lab Sample ID: LCSD 880-34295/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34173 — **Prep Batch: 34295**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.07692		mg/Kg		77	70 - 130	3	35
Ethylbenzene			0.100	0.07998		mg/Kg		80	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1649		mg/Kg		82	70 - 130	7	35
o-Xylene			0.100	0.09309		mg/Kg		93	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-2909-1 MS — **Client Sample ID: FS01A**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34173 — **Prep Batch: 34295**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0998	0.08265		mg/Kg		83	70 - 130
Toluene	<0.00200	U	0.0998	0.07198		mg/Kg		72	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.07267		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1366	F1	mg/Kg		68	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08208		mg/Kg		82	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 890-2909-1 MSD — **Client Sample ID: FS01A**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34173 — **Prep Batch: 34295**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.09325		mg/Kg		93	70 - 130	12	35
Toluene	<0.00200	U	0.100	0.07646		mg/Kg		76	70 - 130	6	35
Ethylbenzene	<0.00200	U	0.100	0.07457		mg/Kg		74	70 - 130	3	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1342	F1	mg/Kg		67	70 - 130	2	35
o-Xylene	<0.00200	U	0.100	0.08506		mg/Kg		85	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-34341/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34338 — **Prep Batch: 34341**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

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

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

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/22 08:23	09/13/22 09:38	1

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

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

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

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

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

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

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

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

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

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	827.2		mg/Kg		80	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	738.7		mg/Kg		74	70 - 130		

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

QC Sample Results

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

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

Lab Sample ID: 890-2914-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 34338 — **Prep Batch: 34341**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	867.5		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	783.4		mg/Kg		78	70 - 130	6	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34276/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34297

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/12/22 13:09	1

Lab Sample ID: LCS 880-34276/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34297

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

Lab Sample ID: LCSD 880-34276/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34297

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	241.4		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 880-19068-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34297

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	91.0		250	361.4		mg/Kg		108	90 - 110		

Lab Sample ID: 880-19068-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 34297

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	91.0		250	361.9		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

GC VOA

Analysis Batch: 34173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Total/NA	Solid	8021B	34295
MB 880-34213/5-A	Method Blank	Total/NA	Solid	8021B	34213
MB 880-34295/5-A	Method Blank	Total/NA	Solid	8021B	34295
LCS 880-34295/1-A	Lab Control Sample	Total/NA	Solid	8021B	34295
LCSD 880-34295/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34295
890-2909-1 MS	FS01A	Total/NA	Solid	8021B	34295
890-2909-1 MSD	FS01A	Total/NA	Solid	8021B	34295

Prep Batch: 34213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34213/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Total/NA	Solid	5035	
MB 880-34295/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34295/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34295/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2909-1 MS	FS01A	Total/NA	Solid	5035	
890-2909-1 MSD	FS01A	Total/NA	Solid	5035	

Analysis Batch: 34345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Total/NA	Solid	8015 NM	

Analysis Batch: 34338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Total/NA	Solid	8015B NM	34341
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015B NM	34341
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34341
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34341
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	34341
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34341

Prep Batch: 34341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Total/NA	Solid	8015NM Prep	
MB 880-34341/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34341/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34341/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2914-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2914-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

HPLC/IC

Leach Batch: 34276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Soluble	Solid	DI Leach	
MB 880-34276/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34276/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34276/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-19068-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-19068-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2909-1	FS01A	Soluble	Solid	300.0	34276
MB 880-34276/1-A	Method Blank	Soluble	Solid	300.0	34276
LCS 880-34276/2-A	Lab Control Sample	Soluble	Solid	300.0	34276
LCSD 880-34276/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34276
880-19068-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	34276
880-19068-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34276

Lab Chronicle

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

Client Sample ID: FS01A
Date Collected: 09/08/22 13:15
Date Received: 09/09/22 09:22

Lab Sample ID: 890-2909-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34295	09/12/22 13:31	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34173	09/12/22 22:18	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34345	09/13/22 08:36	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34306	09/12/22 15:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34341	09/13/22 08:23	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34338	09/13/22 17:25	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34276	09/12/22 11:11	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34297	09/12/22 14:50	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

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 120

Job ID: 890-2909-1
SDG: 03D2057019

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: MCA 120

Job ID: 890-2909-1
SDG: 03D2057019

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2909-1	FS01A	Solid	09/08/22 13:15	09/09/22 09:22	1

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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:	Josh Adams	Bill to: (if different)	Josh Adams
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:	303.517.8437	Email:	jadams@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 120	Turn Around	☐ Routine ☑ Rush 2D
Project Number:	03D2057019	Due Date:	09.13.2022
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TUM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01A	S	09.08.2022	1315	1'	comp	1	X	X	X

890-2909 Chain of Custody

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

Sample Comments

Incident Number
NAPP2209531688

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
	Chris Cruz	9.9.22 9:27			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2909-1
SDG Number: 03D2057019

Login Number: 2909
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: 890-2909-1
SDG Number: 03D2057019

Login Number: 2909
List Number: 2
Creator: Rodriguez, Leticia

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

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

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 144173

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 144173
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	9/21/2022