

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	nAPP2223850551
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Empire New Mexico LLC	OGRID	330679
Contact Name	Toby Holland	Contact Telephone	(575) 704-2329
Contact email	tholland@empirepetrocorp.com	Incident #	(assigned by OCD)
Contact mailing address	2200 S. Utica Place Suite 150 Tulsa, OK 74114		

Location of Release Source

Latitude 32.481208 Longitude -103.273891
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	EMSU Satellite Battery #10	Site Type	Battery
Date Release Discovered	07/28/2022	API#	(if applicable)

Unit Letter	Section	Township	Range	County
F	16	21S	36E	Lea

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 110	Volume Recovered (bbls) 0
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A hose broke on production equipment inside the containment. Fluids released to the well pad and surrounding pasture. Equipment was dispatched to recover fluids and remove saturated soil.

Form C-141

Page 2

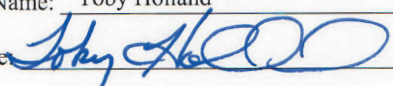
State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Greater than 25 bbls released
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? NOR filed online 08/12/2022	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Toby Holland	Title: Environmental Coordinator
Signature: 	Date: 8-19-22
email: tholland@empirepetrocorp.com	Telephone: (575)704-2329
<u>OCD Only</u>	
Received by: _____	Date: _____

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

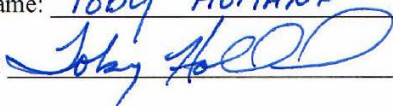
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods,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

State of New Mexico
Oil Conservation Division

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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: Toby Holland Title: _____
Signature:  Date: 10-25-22
email: _____ Telephone: 575-704-2329

OCD Only

Received by: Jocelyn Harimon Date: 10/26/2022

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Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Toby Holland Title: _____
Signature: Toby Holland Date: 10-25-22
email: _____ Telephone: 575-704-2329

OCD Only

Received by: Jocelyn Harimon Date: 10/26/2022

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Jennifer Nobui Date: 11/22/2022



October 25, 2022

New Mexico Oil Conservation Division

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

**Re: Remediation Work Plan and Variance Request
EMSU Satellite Battery #10
Lea County, New Mexico
Empire New Mexico LLC
NMOCD Incident No: nAPP2223850551**

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Empire New Mexico LLC (Empire), presents this *Remediation Work Plan and Variance Request* for a release at the EMSU Satellite Battery #10 well pad (Site). The Site is associated with oil and gas exploration and production operations and is located on New Mexico State Land in rural Lea County, New Mexico (Figure 1). The proposed work will be performed to remediate impacted soil originating from a broken hose on production equipment at the Site. The Site is located in Unit F, Section 16, Township 21 South, Range 36 East, in Lea County, New Mexico.

SITE BACKGROUND

On July 28, 2022, Empire discovered a 110-barrel (bbl) release of crude oil at the Site. Upon inspection, it was discovered that a broken hose on production equipment had failed, causing the release. The fluids flowed outside of a bermed secondary containment onto the well pad and adjacent dirt roadways and pasture (shown on Photograph 1, Appendix A). Empire retained a contractor to remove standing fluids and saturated soils at the Site. Empire reported the release to the New Mexico Oil Conservation Division (NMOCD) within 24 hours of discovery of the release. Empire also reported the release on a *Release Notification Form C-141* (Form C-141) on August 19, 2022. The NMOCD has assigned the Site Incident Number nAPP2223850551.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

As part of the site investigation, local geology/hydrogeology and nearby sensitive receptors were assessed in accordance with Title 19, Chapter 15, Part 29, Sections 11 and 12 (19.15.29.11 and 12) of the New Mexico Administrative Code (NMAC). Potential nearby receptors were assessed through desktop reviews of United States Geological Survey (USGS) topographic maps, Federal Emergency Management Administration (FEMA) Geographic Information System (GIS) maps, New Mexico Office of the State Engineer (NMOSE) database, aerial photographs, and site-specific observations. This information is further discussed below.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs). The nearest permitted well with depth to water information is NMOSE permitted well CP-0050 (Appendix B) located approximately 0.47 miles east of the Site. The recorded depth to

water obtained from the NMOSE database is 195 feet bgs with a total well depth of 215 feet. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake (Figure 1). No watercourses, wellhead protection areas, springs, or domestic/stock wells are located within a ½-mile from the Site. The Site is not within a 100-year floodplain, overlying a subsurface mine, or located within an area underlain by unstable geology (area designated as low potential karst). Schools, hospitals, institutions, churches, and/or other occupied permanent residence or structures are not located within 300 feet of the Site.

Based on the site characterization described above, the following NMOCD Table I Closure Criteria (Closure Criteria) apply to the Site:

- 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 diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies for the top 4 feet of soil in areas that will be reclaimed following remediation, per 19.15.29.13.D (1) NMAC

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On August 1, 2022, Ensolum personnel completed a Site visit to evaluate the release extent based on information provide on the Form C-141 and visual observations. Based on the Site reconnaissance, the majority of the released fluids stayed on the well pad and within the adjacent roads to the east and north of the well pad. Small areas of pasture were impacted as fluids migrated off of the well pad and roads, as shown on Figure 2. Six preliminary soil samples (SS01 through SS06) were collected within the release extent at a depth of 0.5 feet bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped using a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

Soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name method of analysis, and immediately place 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 indicated that all concentrations were in compliance with the Table I Closure Criteria; however, chloride concentrations exceeding the reclamation requirement were detected in samples SS03 through SS05, located in off-pad areas. No other exceedances of the reclamation requirement were detected during the preliminary sampling event. Based on these results, additional delineation work was recommended.

On September 20, 2022, additional delineation samples were collected within the release extent to vertically delineate TPH and chloride in soil. Due to proximity of numerous pipelines on the well pad, roads, and pasture, potholes PH01 through PH04 (advanced using a backhoe, Photograph 2, Appendix A) were limited to areas clear of utilities. In order to collect additional samples, a hydrovac truck was used to advance potholes PH05 through PH07 on

September 29, 2022. Delineation samples were field screened and collected in the manner described above. Two samples were analyzed from each pothole; one soil sample with the highest field screening result and one soil sample from the terminus of each pothole.

Laboratory analytical results indicate that all concentrations are in compliance with the Table I Closure Criteria; however, soil sample PH03 contained chloride at a concentration exceeding the reclamation requirement at 1-foot bgs. No other exceedances of Closure Criteria or reclamation requirement concentrations were detected during the delineation event. Soil analytical results are summarized in Table 1, with complete laboratory analytical reports included as Appendix C

REMEDIATION WORK PLAN AND VARIANCE REQUEST

Laboratory analytical results have indicated all COC concentrations in preliminary and delineation soil samples are in compliance with the NMOCD Table I Closure Criteria applicable to the Site; however, chloride concentrations exceeding the reclamation requirement are present in the soil to a depth of approximately 1-foot bgs in the vicinity of samples SS03, SS04, SS05, and PH03. In total, the surface area of the release extent in off-pad areas (outlined in orange and blue on Figure 2) measures approximately 27,200 square feet, equating to an estimated volume of 1,000 cubic yards of soil containing chloride concentrations that exceed the reclamation requirements.

To address waste-containing soil as a result of the July 2022 release at the Site, Empire proposes to remove the top 1 foot of waste-containing soil northeast of Site, which is on the east lease road and within the pasture (Figure 2). Excavation work will be conducted with a combination of digging equipment (backhoe and/or track hoe) and hydrovac (where utilities are present). Once waste-containing soil is removed, Empire will collect 5-point composite samples from the excavation floor. Due to the estimated 27,200 square foot areal extent of the waste-containing soil, Empire requests a variance for the frequency of excavation confirmation samples. Empire proposes the frequency of confirmation sampling for the excavation to be decreased from every 200 square feet (approximately 136 samples) to every 500 square feet (approximately 55 samples). The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing prior to collection into the laboratory-provided containers. Because chloride is the only COC exceeding the reclamation requirement, Empire also proposes to omit TPH and BTEX analysis for the confirmation soil samples.

Once waste-containing soil has been removed, excavated areas will be backfilled and recontoured to match the original land surface grade using clean soil. Areas originally vegetated at the Site (in the pasture) will be backfilled with topsoil and reseeded for revegetation.

ON-PAD ADDITIONAL DELINEATION

In order to fully delineate the lateral extent of COCs detected in samples SS01, SS02, and PH01, Empire will advance several additional potholes on and around the well pad. Two samples will be collected and analyzed from each pothole to complete the lateral delineation at the Site; one soil sample with the highest field screening result and one soil sample from the terminus of each pothole. Samples will be submitted collected and submitted for laboratory analysis of TPH, BTEX, and chloride in the manner described above.

SCHEDULE

Empire will complete the excavation and delineation work within 60 days of NMOCD approval of this *Remediation Work Plan and Variance Request*. Additionally, Empire will report the results of the remediation and delineation work to the NMOCD within two weeks following receipt of the analytical results.

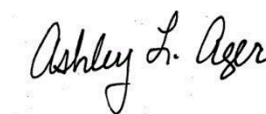
If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,

Ensolum, LLC



Stuart Hyde, LG
Senior Geologist
(970) 903-1607
shyde@ensolum.com



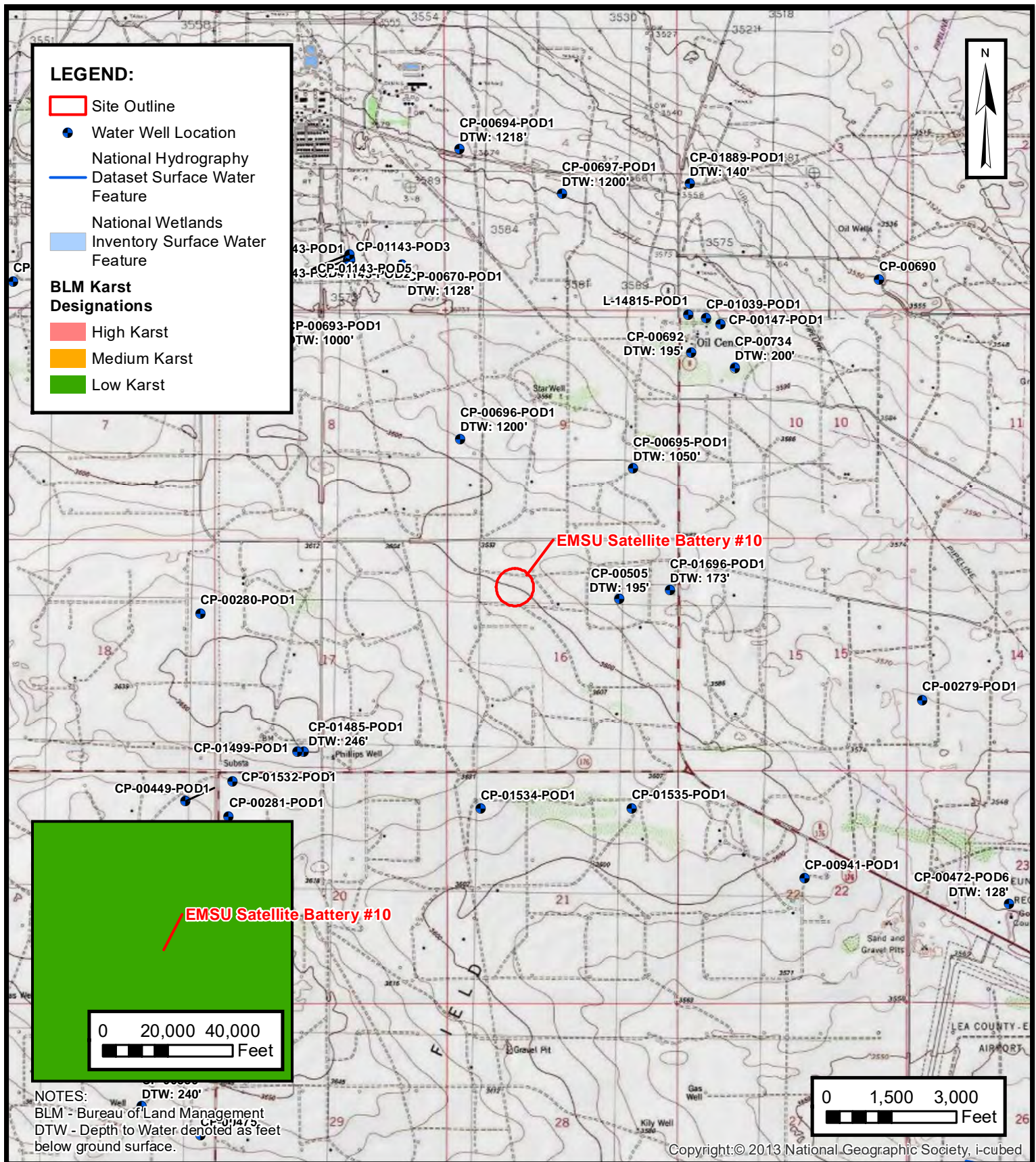
Ashley Ager, MS, PG
Principal, Geologist
(970) 946-1093
aager@ensolum.com

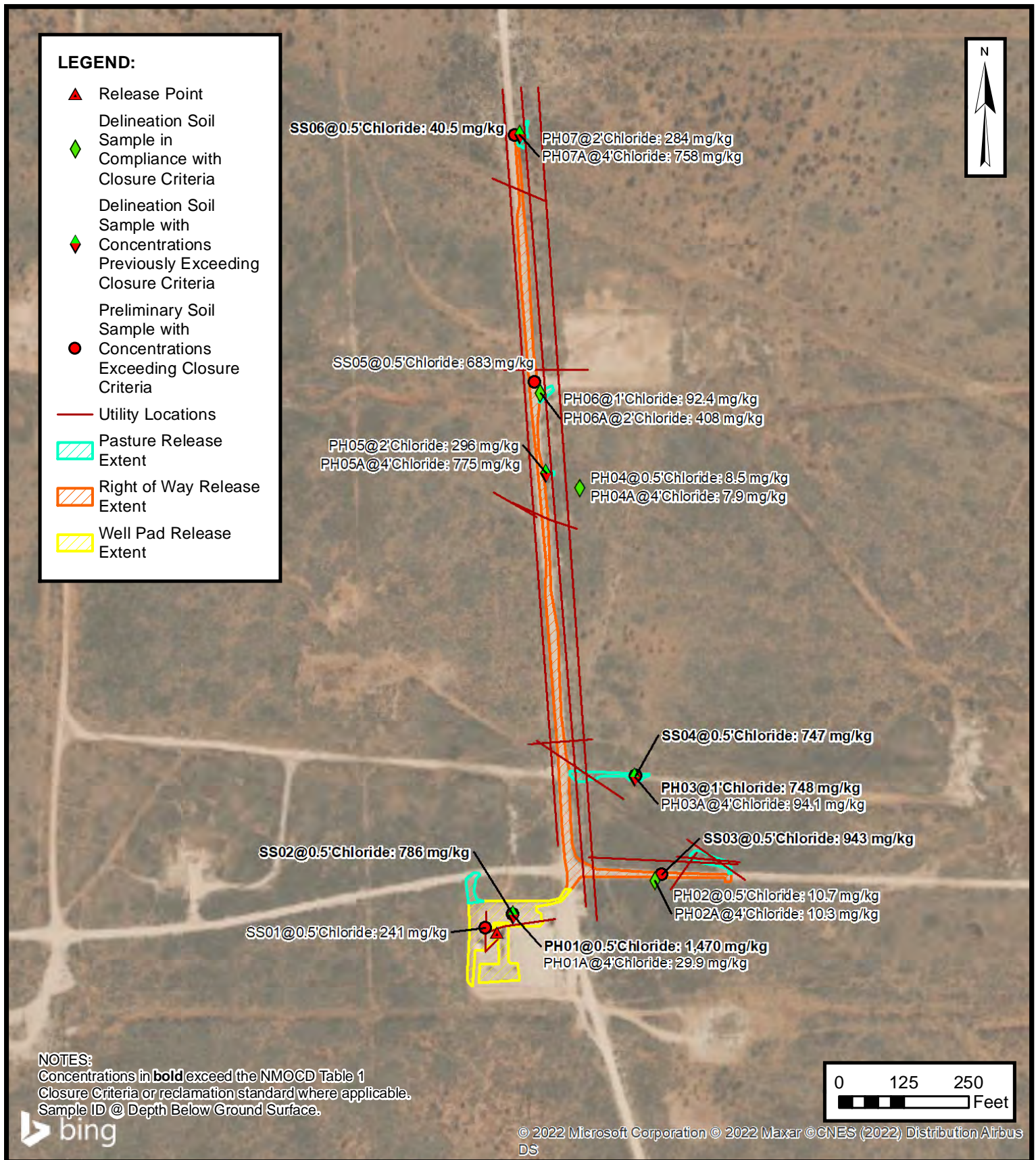
Attachments:

Figure 1: Site Receptor Map
Figure 2: Preliminary and Delineation Soil Sample Locations
Table 1: Soil Sample Analytical Results
Appendix A: Project Photographs
Appendix B: NMOSE Well Summary
Appendix C: Laboratory Analytical Reports



Figures





PRELIMINARY AND DELINEATION SOIL SAMPLE LOCATIONS

EMPIRE NEW MEXICO, LLC
 EMSU SATELLITE BATTERY #10
 Incident Number nAPP2223850551
 Unit M Sec 16 T21S R36E
 Lea County, New Mexico

FIGURE
2



Tables



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 EMSU Satellite Battery #10
 Empire New Mexico, LLC
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29), Depth 0 - 4 Feet			10	50	NE	NE	NE	NE	100	600
NMOCD Table I Closure Criteria (NMAC 19.15.29), Depth >4 Feet			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Soil Samples										
SS01	8/1/2022	0.5	<0.0403	<0.0806	<50.0	487	55.8	487	543	241
SS02	8/1/2022	0.5	<0.0398	<0.0795	<50.0	75.8	<50.0	75.8	75.8	786
SS03	8/1/2022	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	943
SS04	8/1/2022	0.5	<0.0396	<0.0792	<50.0	<50.0	<50.0	<50.0	<50.0	747
SS05	8/1/2022	0.5	<0.0404	<0.0808	<50.0	51.8	<50.0	51.8	51.8	683
SS06	8/1/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	40.5
Delineation Soil Samples										
PH01	9/20/2022	0.5	<0.00200	<0.00401	<49.9	65.5	<49.9	65.5	65.5	1,470
PH01A	9/20/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	29.9
PH02	9/20/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	10.7
PH02A	9/20/2022	4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	10.3
PH03	9/20/2022	1	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	748
PH03A	9/20/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	94.1
PH04	9/20/2022	0.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	8.5
PH04A	9/20/2022	4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	7.9
PH05	9/29/2022	2	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	296
PH05A	9/29/2022	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	775
PH06	9/29/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	92.4
PH06A	9/29/2022	2	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	408
PH07	9/29/2022	2	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	284
PH07A	9/29/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	758

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon



APPENDIX A

Project Photographs

PROJECT PHOTOGRAPHS

EMSU Satellite Battery #10

Lea County, New Mexico

Empire New Mexico LLC

Photograph 1

Aerial view of the Site and crude oil staining, looking northwest.

**Photograph 2**

View of pothole PH03, looking west.





APPENDIX B

NMOSE Well Summary

Form WR-23

STATE ENGINEER OFFICE

WELL RECORD

SANTA FE

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(A) Owner of well Snyder Ranches Ltd.

P. O. Box 726

Street and Number Lovington, State New Mex. 88260

Well was drilled under Permit No. CP-505 and is located in the NE 1/4 of Section 16 Twp. 21 S Rge. 36 E

(B) Drilling Contractor W. L. VanNoy License No. WD 208

Street and Number P. O. Box 74

City Oil Center, State New Mexico 88266

Drilling was commenced July 8, 1972

Drilling was completed July 18, 1972

(Plat of, 640 acres)

Elevation at top of casing in feet above sea level 215 Total depth of well

State whether well is shallow or artesian Depth to water upon completion 195

Section 2

PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation
	From	To		
1	200	210	10	water sand
2				
3				
4				
5				

Section 3

RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth		Feet	Type Shoe	Perforations	
			Top	Bottom			From	To
8 5/8		welded	0	195	195			
6 5/8		welded	0	215	215		190	210

Section 4

RECORD OF MUDDING AND CEMENTING

Depth in Feet		Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
From	To				

Section 5

PLUGGING RECORD

Name of Plugging Contractor License No.

Street and Number City State

Tons of Clay used Tons of Roughage used Type of roughage

Plugging method used Date Plugged 19

Plugging approved by:

Cement Plugs were placed as follows:

No.	Depth of Plug		No. of Sacks Used
	From	To	

Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received

82 8 WD 61 MR 2751

File No.

CP-505

Use

S.H.K.

Location No.

21.36.16.22 422

LOG OF WELL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Well Driller



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

2018 JAN -2 AM 10:56
STATE ENGINEER OFFICE
ROSELLE, NEW MEXICO
88234

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER)				OSE FILE NUMBER(S)			
	1				CP-1696			
	WELL OWNER NAME(S)				PHONE (OPTIONAL)			
	WILBERTA TIVIS/TIVIS RANCH, LLC							
	WELL OWNER MAILING ADDRESS				CITY STATE			
PO BOX 1614				EUNICE NM				
WELL LOCATION (FROM GPS)	DEGREES		MINUTES	SECONDS	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
	LATITUDE	32	28	59.08 N				
	LONGITUDE	103	15	44.09 W				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE								
SE 1/4 NE 1/4 NE 1/4 S16 T21S R36E								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER		NAME OF LICENSED DRILLER		NAME OF WELL DRILLING COMPANY			
	1755		JOHN NORRIS		HUNGRY HORSE, LLC			
	DRILLING STARTED		DRILLING ENDED		DEPTH OF COMPLETED WELL (FT)		BORE HOLE DEPTH (FT)	
	12/11/2017		12/13/2017		210'		210'	
	COMPLETED WELL IS:		<input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)		DEPTH WATER FIRST ENCOUNTERED (FT)			
					173'			
	DRILLING FLUID:		<input type="checkbox"/> AIR <input checked="" type="checkbox"/> MUD		ADDITIVES - SPECIFY:			
	DRILLING METHOD:		<input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:					
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
0	170	10 3/4	6" CASING	GLUED	6"	.625		
170	210	10 3/4	6" SLOTTED	GLUED	6"	.625	.035	
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	20	10 3/4	CEMENT GROUT	10 BAGS	TOP		
	20	170	10 3/4	3/8" PEA GRAVEL	2YDS	TOP		
	170	210	10 3/4	SILICA SAND	30 BAGS	TOP		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 10/29/15)

FILE NUMBER	CP-11696	POD NUMBER	1	TRN NUMBER	616850
LOCATION	S15.36E. 16.22.4			5100K	PAGE 1 OF 2

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9-11-52
8-11-52
7-11-52
6-11-52
5-11-52
4-11-52
3-11-52
2-11-52
1-11-52
OFFICE
EXT. 50

FOR OSE INTERNAL USE



3709 S. Eunice Hwy
P.O. Box 1058 Hobbs, NM. 88241
575-393-3386

ROTARY
DRILLING RIG
N.M. LIC # WD-1682

10-11-17

10-13-12

Name WILBERTA TIVIS

Address _____

Well No. _____

Depth 30

Perforation 50

Rig Time _____

Casing 10 1/2" x 10 1/2" Cementing 10 1/2" x 10 1/2"

Total _____

FORMATION

[illegible]

SUPERIOR PRINTING SERVICE INC.



APPENDIX C

Laboratory Analytical Reports



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2700-1

Laboratory Sample Delivery Group: 03C2077001

Client Project/Site: EMSU Satellite Battery #10 (001)

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

Authorized for release by:

8/10/2022 7:59:10 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

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: EMSU Satellite Battery #10 (001)

Laboratory Job ID: 890-2700-1
SDG: 03C2077001

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Definitions/Glossary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high 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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Job ID: 890-2700-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-2700-1****Receipt**

The samples were received on 8/1/2022 3:08 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS05 (890-2700-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: o-Xylene biased high in LCS. Since only an acceptable LCS or LCSD is required per the method, the data has been qualified and reported.(LCS 880-31680/1-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31680 and analytical batch 880-31685 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample duplicate (LCSD) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-31801 and analytical batch 880-31685 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA

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: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Client Sample ID: SS03

Lab Sample ID: 890-2700-1

Date Collected: 08/01/22 11:20

Matrix: Solid

Date Received: 08/01/22 15:08

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		08/08/22 08:17	08/08/22 18:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 18:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 18:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 18:53	1
o-Xylene	<0.00200	U *	0.00200	mg/Kg		08/08/22 08:17	08/08/22 18:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 18:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		70 - 130	08/08/22 08:17	08/08/22 18:53	1
1,4-Difluorobenzene (Surr)	97		70 - 130	08/08/22 08:17	08/08/22 18:53	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			08/09/22 16:38	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			08/05/22 13:04	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		08/03/22 15:56	08/04/22 17:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 17:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130	08/03/22 15:56	08/04/22 17:21	1
o-Terphenyl	102		70 - 130	08/03/22 15:56	08/04/22 17:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	943		4.95	mg/Kg			08/09/22 19:19	1

Client Sample ID: SS05

Lab Sample ID: 890-2700-2

Date Collected: 08/01/22 11:40

Matrix: Solid

Date Received: 08/01/22 15:08

Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0404	U	0.0404	mg/Kg		08/08/22 08:17	08/08/22 19:14	20
Toluene	<0.0404	U	0.0404	mg/Kg		08/08/22 08:17	08/08/22 19:14	20
Ethylbenzene	<0.0404	U	0.0404	mg/Kg		08/08/22 08:17	08/08/22 19:14	20
m-Xylene & p-Xylene	<0.0808	U	0.0808	mg/Kg		08/08/22 08:17	08/08/22 19:14	20
o-Xylene	<0.0404	U *	0.0404	mg/Kg		08/08/22 08:17	08/08/22 19:14	20
Xylenes, Total	<0.0808	U	0.0808	mg/Kg		08/08/22 08:17	08/08/22 19:14	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130	08/08/22 08:17	08/08/22 19:14	20

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Client Sample ID: SS05

Lab Sample ID: 890-2700-2

Date Collected: 08/01/22 11:40

Matrix: Solid

Date Received: 08/01/22 15:08

Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	95		70 - 130	08/08/22 08:17	08/08/22 19:14	20

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0808	U	0.0808	mg/Kg			08/09/22 16:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	51.8		50.0	mg/Kg			08/05/22 13:04	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		08/03/22 15:56	08/04/22 17:43	1
Diesel Range Organics (Over C10-C28)	51.8		50.0	mg/Kg		08/03/22 15:56	08/04/22 17:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 17:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			08/03/22 15:56	08/04/22 17:43	1
o-Terphenyl	96		70 - 130			08/03/22 15:56	08/04/22 17:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	683		5.00	mg/Kg			08/09/22 19:42	1

Client Sample ID: SS06

Lab Sample ID: 890-2700-3

Date Collected: 08/01/22 11:50

Matrix: Solid

Date Received: 08/01/22 15:08

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		08/08/22 08:17	08/08/22 18:33	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/08/22 08:17	08/08/22 18:33	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/08/22 08:17	08/08/22 18:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/08/22 08:17	08/08/22 18:33	1
o-Xylene	<0.00199	U **	0.00199	mg/Kg		08/08/22 08:17	08/08/22 18:33	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/08/22 08:17	08/08/22 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	08/08/22 08:17	08/08/22 18:33	1
1,4-Difluorobenzene (Surr)	99		70 - 130	08/08/22 08:17	08/08/22 18:33	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/09/22 16:38	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			08/05/22 13:04	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Client Sample ID: SS06

Lab Sample ID: 890-2700-3

Date Collected: 08/01/22 11:50

Matrix: Solid

Date Received: 08/01/22 15:08

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	<49.9	U	49.9	mg/Kg		08/03/22 15:56	08/04/22 18:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/03/22 15:56	08/04/22 18:05	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/03/22 15:56	08/04/22 18:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130			08/03/22 15:56	08/04/22 18:05	1
o-Terphenyl	84		70 - 130			08/03/22 15:56	08/04/22 18:05	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.5		5.05	mg/Kg			08/09/22 19:50	1

Surrogate Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

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)
880-17530-A-5-E MS	Matrix Spike	125	97
880-17530-A-5-F MSD	Matrix Spike Duplicate	128	103
880-17833-A-1-A MS	Matrix Spike	106	94
880-17833-A-1-B MSD	Matrix Spike Duplicate	112	92
890-2700-1	SS03	75	97
890-2700-2	SS05	134 S1+	95
890-2700-3	SS06	107	99
LCS 880-31680/1-A	Lab Control Sample	125	92
LCS 880-31801/1-A	Lab Control Sample	103	97
LCSD 880-31680/2-A	Lab Control Sample Dup	106	95
LCSD 880-31801/2-A	Lab Control Sample Dup	106	97
MB 880-31680/5-A	Method Blank	98	90
MB 880-31801/5-A	Method Blank	104	91
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)
880-17544-A-1-D MS	Matrix Spike	69 S1-	73
880-17544-A-1-E MSD	Matrix Spike Duplicate	79	81
890-2700-1	SS03	80	102
890-2700-2	SS05	78	96
890-2700-3	SS06	71	84
LCS 880-31439/2-A	Lab Control Sample	86	97
LCSD 880-31439/3-A	Lab Control Sample Dup	88	101
MB 880-31439/1-A	Method Blank	96	118
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31680/5-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31680

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 12:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/08/22 08:17	08/08/22 12:03	1
1,4-Difluorobenzene (Surr)	90		70 - 130	08/08/22 08:17	08/08/22 12:03	1

Lab Sample ID: LCS 880-31680/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09608		mg/Kg		96	70 - 130
Toluene	0.100	0.1059		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1185		mg/Kg		118	70 - 130
m-Xylene & p-Xylene	0.200	0.2507		mg/Kg		125	70 - 130
o-Xylene	0.100	0.1380	*+	mg/Kg		138	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-31680/2-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1071		mg/Kg		107	70 - 130	11	35
Toluene	0.100	0.1066		mg/Kg		107	70 - 130	1	35
Ethylbenzene	0.100	0.1143		mg/Kg		114	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2280		mg/Kg		114	70 - 130	10	35
o-Xylene	0.100	0.1244		mg/Kg		124	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-17530-A-5-E MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.1066		mg/Kg		105	70 - 130
Toluene	<0.00199	U	0.101	0.1147		mg/Kg		114	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

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

Lab Sample ID: 880-17530-A-5-E MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.1313		mg/Kg		130	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.2708	F1	mg/Kg		134	70 - 130
o-Xylene	<0.00199	U F1 *+	0.101	0.1474	F1	mg/Kg		146	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-17530-A-5-F MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.1056		mg/Kg		105	70 - 130	1	35
Toluene	<0.00199	U	0.100	0.1115		mg/Kg		111	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.100	0.1213		mg/Kg		121	70 - 130	8	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.2484		mg/Kg		124	70 - 130	9	35
o-Xylene	<0.00199	U F1 *+	0.100	0.1355	F1	mg/Kg		135	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: MB 880-31801/5-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31801

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 15:42	08/08/22 22:58	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	08/08/22 15:42	08/08/22 22:58	1
1,4-Difluorobenzene (Surr)	91		70 - 130	08/08/22 15:42	08/08/22 22:58	1

Lab Sample ID: LCS 880-31801/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1012		mg/Kg		101	70 - 130
Toluene	0.100	0.09868		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1031		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	0.200	0.2069		mg/Kg		103	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

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

Lab Sample ID: LCS 880-31801/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.1139		mg/Kg		114	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-31801/2-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09009		mg/Kg		90	70 - 130	12	35
Toluene	0.100	0.08972		mg/Kg		90	70 - 130	10	35
Ethylbenzene	0.100	0.09649		mg/Kg		96	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1946		mg/Kg		97	70 - 130	6	35
o-Xylene	0.100	0.1077		mg/Kg		108	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-17833-A-1-A MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1	0.0998	0.05435	F1	mg/Kg		54	70 - 130
Toluene	<0.00201	U F1	0.0998	0.03513	F1	mg/Kg		35	70 - 130
Ethylbenzene	<0.00201	U F1	0.0998	0.02412	F1	mg/Kg		24	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.04804	F1	mg/Kg		24	70 - 130
o-Xylene	<0.00201	U F2 F1	0.0998	0.02474	F1	mg/Kg		25	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-17833-A-1-B MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0996	0.04430	F1	mg/Kg		44	70 - 130	20	35
Toluene	<0.00201	U F1	0.0996	0.02686	F1	mg/Kg		27	70 - 130	27	35
Ethylbenzene	<0.00201	U F1	0.0996	0.01866	F1	mg/Kg		19	70 - 130	26	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.03797	F1	mg/Kg		19	70 - 130	23	35
o-Xylene	<0.00201	U F2 F1	0.0996	0.01578	F2 F1	mg/Kg		16	70 - 130	44	35

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

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

Lab Sample ID: 880-17833-A-1-B MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31801

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

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

Lab Sample ID: MB 880-31439/1-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31439

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
1-Chlorooctane	96		70 - 130			08/03/22 15:56	08/04/22 10:03	1	
o-Terphenyl	118		70 - 130			08/03/22 15:56	08/04/22 10:03	1	

Lab Sample ID: LCS 880-31439/2-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31439

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	974.8		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	955.3		mg/Kg		96	70 - 130		
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	86		70 - 130						
o-Terphenyl	97		70 - 130						

Lab Sample ID: LCSD 880-31439/3-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31439

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1034		mg/Kg		103	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	985.7		mg/Kg		99	70 - 130	3	20
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	88		70 - 130						
o-Terphenyl	101		70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

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

Lab Sample ID: 880-17544-A-1-D MS

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31439

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	936.9		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	766.8		mg/Kg		77	70 - 130		

Lab Sample ID: 880-17544-A-1-E MSD

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31439

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	908.2		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	866.8		mg/Kg		87	70 - 130	12	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	79		70 - 130								
o-Terphenyl	81		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31444/1-A

Matrix: Solid

Analysis Batch: 31665

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			08/09/22 14:15	1

Lab Sample ID: LCS 880-31444/2-A

Matrix: Solid

Analysis Batch: 31665

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	233.6		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-31444/3-A

Matrix: Solid

Analysis Batch: 31665

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	234.4		mg/Kg		94	90 - 110	0	20

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2695-A-4-C MS										Client Sample ID: Matrix Spike			
Matrix: Solid										Prep Type: Soluble			
Analysis Batch: 31665													
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits				
Chloride	81.0		251	328.8		mg/Kg		99	90 - 110				

Lab Sample ID: 890-2695-A-4-D MSD										Client Sample ID: Matrix Spike Duplicate			
Matrix: Solid										Prep Type: Soluble			
Analysis Batch: 31665													
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit		
Chloride	81.0		251	327.2		mg/Kg		98	90 - 110	0	20		

QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

GC VOA

Prep Batch: 31680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Total/NA	Solid	5035	
890-2700-2	SS05	Total/NA	Solid	5035	
890-2700-3	SS06	Total/NA	Solid	5035	
MB 880-31680/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31680/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31680/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17530-A-5-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17530-A-5-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Total/NA	Solid	8021B	31680
890-2700-2	SS05	Total/NA	Solid	8021B	31680
890-2700-3	SS06	Total/NA	Solid	8021B	31680
MB 880-31680/5-A	Method Blank	Total/NA	Solid	8021B	31680
MB 880-31801/5-A	Method Blank	Total/NA	Solid	8021B	31801
LCS 880-31680/1-A	Lab Control Sample	Total/NA	Solid	8021B	31680
LCS 880-31801/1-A	Lab Control Sample	Total/NA	Solid	8021B	31801
LCSD 880-31680/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31680
LCSD 880-31801/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31801
880-17530-A-5-E MS	Matrix Spike	Total/NA	Solid	8021B	31680
880-17530-A-5-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31680
880-17833-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	31801
880-17833-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31801

Prep Batch: 31801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31801/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31801/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31801/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17833-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-17833-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Total/NA	Solid	Total BTEX	
890-2700-2	SS05	Total/NA	Solid	Total BTEX	
890-2700-3	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Total/NA	Solid	8015NM Prep	
890-2700-2	SS05	Total/NA	Solid	8015NM Prep	
890-2700-3	SS06	Total/NA	Solid	8015NM Prep	
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

GC Semi VOA

Analysis Batch: 31457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Total/NA	Solid	8015B NM	31439
890-2700-2	SS05	Total/NA	Solid	8015B NM	31439
890-2700-3	SS06	Total/NA	Solid	8015B NM	31439
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015B NM	31439
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31439
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31439
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	31439
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31439

Analysis Batch: 31586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Total/NA	Solid	8015 NM	
890-2700-2	SS05	Total/NA	Solid	8015 NM	
890-2700-3	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Soluble	Solid	DI Leach	
890-2700-2	SS05	Soluble	Solid	DI Leach	
890-2700-3	SS06	Soluble	Solid	DI Leach	
MB 880-31444/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31444/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31444/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2695-A-4-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2695-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2700-1	SS03	Soluble	Solid	300.0	31444
890-2700-2	SS05	Soluble	Solid	300.0	31444
890-2700-3	SS06	Soluble	Solid	300.0	31444
MB 880-31444/1-A	Method Blank	Soluble	Solid	300.0	31444
LCS 880-31444/2-A	Lab Control Sample	Soluble	Solid	300.0	31444
LCSD 880-31444/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31444
890-2695-A-4-C MS	Matrix Spike	Soluble	Solid	300.0	31444
890-2695-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31444

Lab Chronicle

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Client Sample ID: SS03

Lab Sample ID: 890-2700-1

Date Collected: 08/01/22 11:20

Matrix: Solid

Date Received: 08/01/22 15:08

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	31680	08/08/22 08:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31685	08/08/22 18:53	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31868	08/09/22 16:38	SM	EETSC MII
Total/NA	Analysis	8015 NM		1			31586	08/05/22 13:04	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31439	08/03/22 15:56	DM	EETSC MII
Total/NA	Analysis	8015B NM		1			31457	08/04/22 17:21	AJ	EETSC MII
Soluble	Leach	DI Leach			5.05 g	50 mL	31444	08/03/22 17:00	SMC	EETSC MII
Soluble	Analysis	300.0		1			31665	08/09/22 19:19	CH	EETSC MII

Client Sample ID: SS05

Lab Sample ID: 890-2700-2

Date Collected: 08/01/22 11:40

Matrix: Solid

Date Received: 08/01/22 15:08

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	31680	08/08/22 08:17	EL	EETSC MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	31685	08/08/22 19:14	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31868	08/09/22 16:38	SM	EETSC MII
Total/NA	Analysis	8015 NM		1			31586	08/05/22 13:04	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31439	08/03/22 15:56	DM	EETSC MII
Total/NA	Analysis	8015B NM		1			31457	08/04/22 17:43	AJ	EETSC MII
Soluble	Leach	DI Leach			5 g	50 mL	31444	08/03/22 17:00	SMC	EETSC MII
Soluble	Analysis	300.0		1			31665	08/09/22 19:42	CH	EETSC MII

Client Sample ID: SS06

Lab Sample ID: 890-2700-3

Date Collected: 08/01/22 11:50

Matrix: Solid

Date Received: 08/01/22 15:08

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	31680	08/08/22 08:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31685	08/08/22 18:33	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31868	08/09/22 16:38	SM	EETSC MII
Total/NA	Analysis	8015 NM		1			31586	08/05/22 13:04	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	31439	08/03/22 15:56	DM	EETSC MII
Total/NA	Analysis	8015B NM		1			31457	08/04/22 18:05	AJ	EETSC MII
Soluble	Leach	DI Leach			4.95 g	50 mL	31444	08/03/22 17:00	SMC	EETSC MII
Soluble	Analysis	300.0		1			31665	08/09/22 19:50	CH	EETSC MII

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

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

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

Method Summary

Client: Ensolum

Job ID: 890-2700-1

Project/Site: EMSU Satellite Battery #10 (001)

SDG: 03C2077001

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

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

Sample Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2700-1
SDG: 03C2077001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2700-1	SS03	Solid	08/01/22 11:20	08/01/22 15:08	0.5'
890-2700-2	SS05	Solid	08/01/22 11:40	08/01/22 15:08	0.5'
890-2700-3	SS06	Solid	08/01/22 11:50	08/01/22 15:08	0.5'

- 1
- 2
- 3
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- 12
- 13
- 14



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Tacoma Morrissey
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:	337-257-8307	Email:	mmorrissey@ensolum.com

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

Project Name:	EMSU Satellite Battery #10 (001)	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code	
Project Number:	03C2077001	Due Date:	5 Day TAT		
Project Location:	Eunice	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Gilbert Moreno				
PO #:					
SAMPLE RECEIPT		Temp Blank:	Yes No	Well Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:			
Cooler Custody Seals:	Yes No	Correction Factor:			
Sample Custody Seals:	Yes No	Temperature Reading:			
Total Containers:		Corrected Temperature:			
Parameters					
CHLORIDES (EPA: 300.0)					
TPH (8015)					
BTEX (8021)					
ANALYSIS REQUEST					
PRESERVATIVE CODES					
None: NO DI Water: H ₂ O					
Cool: Cool MeOH: Me					
HCL: HC HNO ₃ : HN					
H ₂ SO ₄ : H ₂ NaOH: Na					
H ₃ PO ₄ : HP					
NaHSO ₄ : NABIS					
Na ₂ S ₂ O ₃ : NaSO ₃					
Zn Acetate+NaOH: Zn					
NaOH+Ascorbic Acid: SACP					
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab Comp
SS03	S	8.1.22	11:20	0.5'	Grab/ 1
SS05	S	8.1.22	11:40	0.5'	Grab/ 1
SS06	S	8.1.22	11:50	0.5'	Grab/ 1
Incident ID:					
Sample Comments					
Cost Center:					



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 SiO₂ Na Sr Ti Sn U V Zn

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	8/1/22 1508			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2700-1

SDG Number: 03C2077001

Login Number: 2700

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: 890-2700-1

SDG Number: 03C2077001

Login Number: 2700

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 08/03/22 10:15 AM

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



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2701-1

Laboratory Sample Delivery Group: 03C2077001

Client Project/Site: EMSU Satellite Battery #10 (001)

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

8/10/2022 7:59:10 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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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: EMSU Satellite Battery #10 (001)

Laboratory Job ID: 890-2701-1
SDG: 03C2077001

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Definitions/Glossary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high 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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Job ID: 890-2701-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-2701-1****Receipt**

The samples were received on 8/1/2022 3:08 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-2701-1), SS02 (890-2701-2) and SS04 (890-2701-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: o-Xylene biased high in LCS. Since only an acceptable LCS or LCSD is required per the method, the data has been qualified and reported.(LCS 880-31680/1-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31680 and analytical batch 880-31685 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample duplicate (LCSD) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-31801 and analytical batch 880-31685 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA

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: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Client Sample ID: SS01

Lab Sample ID: 890-2701-1

Date Collected: 08/01/22 11:00

Matrix: Solid

Date Received: 08/01/22 15:08

Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0403	U	0.0403	mg/Kg		08/08/22 08:17	08/08/22 19:35	20
Toluene	<0.0403	U	0.0403	mg/Kg		08/08/22 08:17	08/08/22 19:35	20
Ethylbenzene	<0.0403	U	0.0403	mg/Kg		08/08/22 08:17	08/08/22 19:35	20
m-Xylene & p-Xylene	<0.0806	U	0.0806	mg/Kg		08/08/22 08:17	08/08/22 19:35	20
o-Xylene	<0.0403	U **	0.0403	mg/Kg		08/08/22 08:17	08/08/22 19:35	20
Xylenes, Total	<0.0806	U	0.0806	mg/Kg		08/08/22 08:17	08/08/22 19:35	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130	08/08/22 08:17	08/08/22 19:35	20
1,4-Difluorobenzene (Surr)	95		70 - 130	08/08/22 08:17	08/08/22 19:35	20

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0806	U	0.0806	mg/Kg			08/09/22 16:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	543		50.0	mg/Kg			08/05/22 13:04	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		08/03/22 15:56	08/04/22 19:10	1
Diesel Range Organics (Over C10-C28)	487		50.0	mg/Kg		08/03/22 15:56	08/04/22 19:10	1
Oil Range Organics (Over C28-C36)	55.8		50.0	mg/Kg		08/03/22 15:56	08/04/22 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	08/03/22 15:56	08/04/22 19:10	1
o-Terphenyl	121		70 - 130	08/03/22 15:56	08/04/22 19:10	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	241		4.98	mg/Kg			08/09/22 19:58	1

Client Sample ID: SS02

Lab Sample ID: 890-2701-2

Date Collected: 08/01/22 11:10

Matrix: Solid

Date Received: 08/01/22 15:08

Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	mg/Kg		08/08/22 08:17	08/08/22 19:55	20
Toluene	<0.0398	U	0.0398	mg/Kg		08/08/22 08:17	08/08/22 19:55	20
Ethylbenzene	<0.0398	U	0.0398	mg/Kg		08/08/22 08:17	08/08/22 19:55	20
m-Xylene & p-Xylene	<0.0795	U	0.0795	mg/Kg		08/08/22 08:17	08/08/22 19:55	20
o-Xylene	<0.0398	U **	0.0398	mg/Kg		08/08/22 08:17	08/08/22 19:55	20
Xylenes, Total	<0.0795	U	0.0795	mg/Kg		08/08/22 08:17	08/08/22 19:55	20

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Client Sample ID: SS02

Lab Sample ID: 890-2701-2

Date Collected: 08/01/22 11:10

Matrix: Solid

Date Received: 08/01/22 15:08

Sample Depth: 0.5'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130	08/08/22 08:17	08/08/22 19:55	20
1,4-Difluorobenzene (Surr)	89		70 - 130	08/08/22 08:17	08/08/22 19:55	20

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0795	U	0.0795	mg/Kg			08/09/22 16:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	75.8		50.0	mg/Kg			08/05/22 13:04	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		08/03/22 15:56	08/04/22 18:26	1
Diesel Range Organics (Over C10-C28)	75.8		50.0	mg/Kg		08/03/22 15:56	08/04/22 18:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 18:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	08/03/22 15:56	08/04/22 18:26	1
o-Terphenyl	118		70 - 130	08/03/22 15:56	08/04/22 18:26	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	786		4.98	mg/Kg			08/09/22 20:06	1

Client Sample ID: SS04

Lab Sample ID: 890-2701-3

Date Collected: 08/01/22 11:30

Matrix: Solid

Date Received: 08/01/22 15:08

Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0396	U	0.0396	mg/Kg		08/08/22 08:17	08/08/22 20:16	20
Toluene	<0.0396	U	0.0396	mg/Kg		08/08/22 08:17	08/08/22 20:16	20
Ethylbenzene	<0.0396	U	0.0396	mg/Kg		08/08/22 08:17	08/08/22 20:16	20
m-Xylene & p-Xylene	<0.0792	U	0.0792	mg/Kg		08/08/22 08:17	08/08/22 20:16	20
o-Xylene	<0.0396	U **	0.0396	mg/Kg		08/08/22 08:17	08/08/22 20:16	20
Xylenes, Total	<0.0792	U	0.0792	mg/Kg		08/08/22 08:17	08/08/22 20:16	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130	08/08/22 08:17	08/08/22 20:16	20
1,4-Difluorobenzene (Surr)	90		70 - 130	08/08/22 08:17	08/08/22 20:16	20

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0792	U	0.0792	mg/Kg			08/09/22 16:38	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			08/05/22 13:04	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Client Sample ID: SS04

Lab Sample ID: 890-2701-3

Date Collected: 08/01/22 11:30

Matrix: Solid

Date Received: 08/01/22 15:08

Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 18:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 18:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 18:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130			08/03/22 15:56	08/04/22 18:48	1
o-Terphenyl	88		70 - 130			08/03/22 15:56	08/04/22 18:48	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	747		5.03	mg/Kg			08/09/22 20:14	1

Surrogate Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

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)
880-17530-A-5-E MS	Matrix Spike	125	97
880-17530-A-5-F MSD	Matrix Spike Duplicate	128	103
880-17833-A-1-A MS	Matrix Spike	106	94
880-17833-A-1-B MSD	Matrix Spike Duplicate	112	92
890-2701-1	SS01	132 S1+	95
890-2701-2	SS02	140 S1+	89
890-2701-3	SS04	140 S1+	90
LCS 880-31680/1-A	Lab Control Sample	125	92
LCS 880-31801/1-A	Lab Control Sample	103	97
LCSD 880-31680/2-A	Lab Control Sample Dup	106	95
LCSD 880-31801/2-A	Lab Control Sample Dup	106	97
MB 880-31680/5-A	Method Blank	98	90
MB 880-31801/5-A	Method Blank	104	91
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)
880-17544-A-1-D MS	Matrix Spike	69 S1-	73
880-17544-A-1-E MSD	Matrix Spike Duplicate	79	81
890-2701-1	SS01	100	121
890-2701-2	SS02	95	118
890-2701-3	SS04	70	88
LCS 880-31439/2-A	Lab Control Sample	86	97
LCSD 880-31439/3-A	Lab Control Sample Dup	88	101
MB 880-31439/1-A	Method Blank	96	118
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31680/5-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31680

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 12:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/08/22 08:17	08/08/22 12:03	1
1,4-Difluorobenzene (Surr)	90		70 - 130	08/08/22 08:17	08/08/22 12:03	1

Lab Sample ID: LCS 880-31680/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09608		mg/Kg		96	70 - 130
Toluene	0.100	0.1059		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1185		mg/Kg		118	70 - 130
m-Xylene & p-Xylene	0.200	0.2507		mg/Kg		125	70 - 130
o-Xylene	0.100	0.1380	*+	mg/Kg		138	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-31680/2-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1071		mg/Kg		107	70 - 130	11	35
Toluene	0.100	0.1066		mg/Kg		107	70 - 130	1	35
Ethylbenzene	0.100	0.1143		mg/Kg		114	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2280		mg/Kg		114	70 - 130	10	35
o-Xylene	0.100	0.1244		mg/Kg		124	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-17530-A-5-E MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.1066		mg/Kg		105	70 - 130
Toluene	<0.00199	U	0.101	0.1147		mg/Kg		114	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

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

Lab Sample ID: 880-17530-A-5-E MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.1313		mg/Kg		130	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.2708	F1	mg/Kg		134	70 - 130
o-Xylene	<0.00199	U F1 *+	0.101	0.1474	F1	mg/Kg		146	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-17530-A-5-F MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.1056		mg/Kg		105	70 - 130	1	35
Toluene	<0.00199	U	0.100	0.1115		mg/Kg		111	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.100	0.1213		mg/Kg		121	70 - 130	8	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.2484		mg/Kg		124	70 - 130	9	35
o-Xylene	<0.00199	U F1 *+	0.100	0.1355	F1	mg/Kg		135	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: MB 880-31801/5-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31801

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 15:42	08/08/22 22:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	08/08/22 15:42	08/08/22 22:58	1
1,4-Difluorobenzene (Surr)	91		70 - 130	08/08/22 15:42	08/08/22 22:58	1

Lab Sample ID: LCS 880-31801/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1012		mg/Kg		101	70 - 130
Toluene	0.100	0.09868		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1031		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	0.200	0.2069		mg/Kg		103	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

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

Lab Sample ID: LCS 880-31801/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.1139		mg/Kg		114	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-31801/2-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09009		mg/Kg		90	70 - 130	12	35
Toluene	0.100	0.08972		mg/Kg		90	70 - 130	10	35
Ethylbenzene	0.100	0.09649		mg/Kg		96	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1946		mg/Kg		97	70 - 130	6	35
o-Xylene	0.100	0.1077		mg/Kg		108	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-17833-A-1-A MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1	0.0998	0.05435	F1	mg/Kg		54	70 - 130
Toluene	<0.00201	U F1	0.0998	0.03513	F1	mg/Kg		35	70 - 130
Ethylbenzene	<0.00201	U F1	0.0998	0.02412	F1	mg/Kg		24	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.04804	F1	mg/Kg		24	70 - 130
o-Xylene	<0.00201	U F2 F1	0.0998	0.02474	F1	mg/Kg		25	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-17833-A-1-B MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0996	0.04430	F1	mg/Kg		44	70 - 130	20	35
Toluene	<0.00201	U F1	0.0996	0.02686	F1	mg/Kg		27	70 - 130	27	35
Ethylbenzene	<0.00201	U F1	0.0996	0.01866	F1	mg/Kg		19	70 - 130	26	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.03797	F1	mg/Kg		19	70 - 130	23	35
o-Xylene	<0.00201	U F2 F1	0.0996	0.01578	F2 F1	mg/Kg		16	70 - 130	44	35

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

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

Lab Sample ID: 880-17833-A-1-B MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31801

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

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

Lab Sample ID: MB 880-31439/1-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31439

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
1-Chlorooctane	96		70 - 130			08/03/22 15:56	08/04/22 10:03	1	
o-Terphenyl	118		70 - 130			08/03/22 15:56	08/04/22 10:03	1	

Lab Sample ID: LCS 880-31439/2-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31439

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	974.8		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	955.3		mg/Kg		96	70 - 130		
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	86		70 - 130						
o-Terphenyl	97		70 - 130						

Lab Sample ID: LCSD 880-31439/3-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31439

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	1000	1034		mg/Kg		103	70 - 130	6	20	
Diesel Range Organics (Over C10-C28)	1000	985.7		mg/Kg		99	70 - 130	3	20	
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	88		70 - 130							
o-Terphenyl	101		70 - 130							

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

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

Lab Sample ID: 880-17544-A-1-D MS

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31439

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	936.9		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	766.8		mg/Kg		77	70 - 130		

Lab Sample ID: 880-17544-A-1-E MSD

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31439

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	908.2		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	866.8		mg/Kg		87	70 - 130	12	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31444/1-A

Matrix: Solid

Analysis Batch: 31665

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			08/09/22 14:15	1

Lab Sample ID: LCS 880-31444/2-A

Matrix: Solid

Analysis Batch: 31665

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	233.6		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-31444/3-A

Matrix: Solid

Analysis Batch: 31665

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	234.4		mg/Kg		94	90 - 110	0	20

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2695-A-4-C MS										Client Sample ID: Matrix Spike			
Matrix: Solid										Prep Type: Soluble			
Analysis Batch: 31665													
	Sample	Sample	Spike	MS	MS				%Rec				
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits				
Chloride	81.0		251	328.8		mg/Kg		99	90 - 110				

Lab Sample ID: 890-2695-A-4-D MSD										Client Sample ID: Matrix Spike Duplicate			
Matrix: Solid										Prep Type: Soluble			
Analysis Batch: 31665													
	Sample	Sample	Spike	MSD	MSD				%Rec			RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD		Limit	
Chloride	81.0		251	327.2		mg/Kg		98	90 - 110	0		20	

QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

GC VOA

Prep Batch: 31680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Total/NA	Solid	5035	
890-2701-2	SS02	Total/NA	Solid	5035	
890-2701-3	SS04	Total/NA	Solid	5035	
MB 880-31680/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31680/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31680/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17530-A-5-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17530-A-5-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Total/NA	Solid	8021B	31680
890-2701-2	SS02	Total/NA	Solid	8021B	31680
890-2701-3	SS04	Total/NA	Solid	8021B	31680
MB 880-31680/5-A	Method Blank	Total/NA	Solid	8021B	31680
MB 880-31801/5-A	Method Blank	Total/NA	Solid	8021B	31801
LCS 880-31680/1-A	Lab Control Sample	Total/NA	Solid	8021B	31680
LCS 880-31801/1-A	Lab Control Sample	Total/NA	Solid	8021B	31801
LCSD 880-31680/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31680
LCSD 880-31801/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31801
880-17530-A-5-E MS	Matrix Spike	Total/NA	Solid	8021B	31680
880-17530-A-5-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31680
880-17833-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	31801
880-17833-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31801

Prep Batch: 31801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31801/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31801/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31801/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17833-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-17833-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Total/NA	Solid	Total BTEX	
890-2701-2	SS02	Total/NA	Solid	Total BTEX	
890-2701-3	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Total/NA	Solid	8015NM Prep	
890-2701-2	SS02	Total/NA	Solid	8015NM Prep	
890-2701-3	SS04	Total/NA	Solid	8015NM Prep	
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

GC Semi VOA

Analysis Batch: 31457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Total/NA	Solid	8015B NM	31439
890-2701-2	SS02	Total/NA	Solid	8015B NM	31439
890-2701-3	SS04	Total/NA	Solid	8015B NM	31439
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015B NM	31439
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31439
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31439
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	31439
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31439

Analysis Batch: 31587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Total/NA	Solid	8015 NM	
890-2701-2	SS02	Total/NA	Solid	8015 NM	
890-2701-3	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Soluble	Solid	DI Leach	
890-2701-2	SS02	Soluble	Solid	DI Leach	
890-2701-3	SS04	Soluble	Solid	DI Leach	
MB 880-31444/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31444/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31444/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2695-A-4-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2695-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2701-1	SS01	Soluble	Solid	300.0	31444
890-2701-2	SS02	Soluble	Solid	300.0	31444
890-2701-3	SS04	Soluble	Solid	300.0	31444
MB 880-31444/1-A	Method Blank	Soluble	Solid	300.0	31444
LCS 880-31444/2-A	Lab Control Sample	Soluble	Solid	300.0	31444
LCSD 880-31444/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31444
890-2695-A-4-C MS	Matrix Spike	Soluble	Solid	300.0	31444
890-2695-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31444

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Client Sample ID: SS01

Lab Sample ID: 890-2701-1

Date Collected: 08/01/22 11:00

Matrix: Solid

Date Received: 08/01/22 15:08

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	31680	08/08/22 08:17	EL	EETSC MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	31685	08/08/22 19:35	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31869	08/09/22 16:38	SM	EETSC MII
Total/NA	Analysis	8015 NM		1			31587	08/05/22 13:04	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31439	08/03/22 15:56	DM	EETSC MII
Total/NA	Analysis	8015B NM		1			31457	08/04/22 19:10	AJ	EETSC MII
Soluble	Leach	DI Leach			5.02 g	50 mL	31444	08/03/22 17:00	SMC	EETSC MII
Soluble	Analysis	300.0		1			31665	08/09/22 19:58	CH	EETSC MII

Client Sample ID: SS02

Lab Sample ID: 890-2701-2

Date Collected: 08/01/22 11:10

Matrix: Solid

Date Received: 08/01/22 15:08

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	31680	08/08/22 08:17	EL	EETSC MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	31685	08/08/22 19:55	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31869	08/09/22 16:38	SM	EETSC MII
Total/NA	Analysis	8015 NM		1			31587	08/05/22 13:04	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31439	08/03/22 15:56	DM	EETSC MII
Total/NA	Analysis	8015B NM		1			31457	08/04/22 18:26	AJ	EETSC MII
Soluble	Leach	DI Leach			5.02 g	50 mL	31444	08/03/22 17:00	SMC	EETSC MII
Soluble	Analysis	300.0		1			31665	08/09/22 20:06	CH	EETSC MII

Client Sample ID: SS04

Lab Sample ID: 890-2701-3

Date Collected: 08/01/22 11:30

Matrix: Solid

Date Received: 08/01/22 15:08

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	31680	08/08/22 08:17	EL	EETSC MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	31685	08/08/22 20:16	MR	EETSC MII
Total/NA	Analysis	Total BTEX		1			31869	08/09/22 16:38	SM	EETSC MII
Total/NA	Analysis	8015 NM		1			31587	08/05/22 13:04	AJ	EETSC MII
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31439	08/03/22 15:56	DM	EETSC MII
Total/NA	Analysis	8015B NM		1			31457	08/04/22 18:48	AJ	EETSC MII
Soluble	Leach	DI Leach			4.97 g	50 mL	31444	08/03/22 17:00	SMC	EETSC MII
Soluble	Analysis	300.0		1			31665	08/09/22 20:14	CH	EETSC MII

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

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: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

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

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

Sample Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10 (001)

Job ID: 890-2701-1
SDG: 03C2077001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2701-1	SS01	Solid	08/01/22 11:00	08/01/22 15:08	0.5'
890-2701-2	SS02	Solid	08/01/22 11:10	08/01/22 15:08	0.5'
890-2701-3	SS04	Solid	08/01/22 11:30	08/01/22 15:08	0.5'

- 1
- 2
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- 10
- 11
- 12
- 13
- 14



Environment Testing
Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Tacoma Morrissey
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:	337-257-8307	Email:	tmorrissey@ensolum.com

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

Project Name:	EMSU Satellite Battery #10 (001)	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code		ANALYSIS REQUEST		Preservative Codes	
Project Number:	03C2077001	Due Date:	5 Day TAT						None: NO DI Water: H ₂ O
Project Location:	Eunice	TAT starts the day received by the lab, if received by 4:30pm							
Sampler's Name:	Gilbert Moreno								
PO #:		Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
SAMPLE RECEIPT		Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID:	TM-007				
Cooler Custody Seals:	Yes No	Correction Factor:							
Sample Custody Seals:	Yes No	Temperature Reading:							
Total Containers:		Corrected Temperature:							
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters		
							CHLORIDES (EPA: 300.0)		
							TPH (8015)		
							BTEX (8021)		
SS01	S	8.1.22	11:00	0.5'	Grab/	1	X	X	X
SS02	S	8.1.22	11:10	0.5'	Grab/	1	X	X	X
SS04	S	8.1.22	11:30	0.5'	Grab/	1	X	X	X
890-2701 Chain of Custody									
Sample Comments									
Incident ID:									
Cost Center:									

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn					
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA		Sb		As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U																
Hq: 1631 / 245.1 / 7470 / 7471																																				
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$35.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.																																				
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time																															
1	<i>Carlsbad</i>		<i>Carlsbad</i>		8/1/22 15:18																															
3																																				
5																																				

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2701-1

SDG Number: 03C2077001

Login Number: 2701

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: 890-2701-1

SDG Number: 03C2077001

Login Number: 2701

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 08/03/22 10:15 AM

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



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3015-1

Laboratory Sample Delivery Group: 03C2077001

Client Project/Site: EMSU Satellite Battery #10

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

10/3/2022 2:28:10 PM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

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results through



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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: EMSU Satellite Battery #10

Laboratory Job ID: 890-3015-1
SDG: 03C2077001

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Definitions/Glossary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Job ID: 890-3015-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-3015-1****Receipt**

The samples were received on 9/20/2022 3:18 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH02 (890-3015-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-35724 and analytical batch 880-35890 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-35172 and analytical batch 880-35220 was outside the upper control limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-35175 and 880-35175 and analytical batch 880-35309 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: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH01

Lab Sample ID: 890-3015-1

Date Collected: 09/20/22 09:00

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:20	1
Toluene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:20	1
Ethylbenzene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:20	1
m-Xylene & p-Xylene	<0.00401	U ** *1	0.00401	mg/Kg		09/29/22 16:18	10/03/22 09:20	1
o-Xylene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:20	1
Xylenes, Total	<0.00401	U ** *1	0.00401	mg/Kg		09/29/22 16:18	10/03/22 09:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	09/29/22 16:18	10/03/22 09:20	1
1,4-Difluorobenzene (Surr)	91		70 - 130	09/29/22 16:18	10/03/22 09:20	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			10/03/22 15:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	65.5		49.9	mg/Kg			09/26/22 13:20	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		09/22/22 11:26	09/23/22 22:45	1
Diesel Range Organics (Over C10-C28)	65.5		49.9	mg/Kg		09/22/22 11:26	09/23/22 22:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/22/22 11:26	09/23/22 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	09/22/22 11:26	09/23/22 22:45	1
o-Terphenyl	105		70 - 130	09/22/22 11:26	09/23/22 22:45	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1470	F1	25.0	mg/Kg			09/24/22 21:32	5

Client Sample ID: PH01A

Lab Sample ID: 890-3015-2

Date Collected: 09/20/22 09:20

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:41	1
Toluene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:41	1
Ethylbenzene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:41	1
m-Xylene & p-Xylene	<0.00399	U ** *1	0.00399	mg/Kg		09/29/22 16:18	10/03/22 09:41	1
o-Xylene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 09:41	1
Xylenes, Total	<0.00399	U ** *1	0.00399	mg/Kg		09/29/22 16:18	10/03/22 09:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130	09/29/22 16:18	10/03/22 09:41	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH01A

Lab Sample ID: 890-3015-2

Date Collected: 09/20/22 09:20

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	101		70 - 130	09/29/22 16:18	10/03/22 09:41	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/03/22 15:02	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			09/26/22 13:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/22/22 11:26	09/23/22 23:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/22/22 11:26	09/23/22 23:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/22/22 11:26	09/23/22 23:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			09/22/22 11:26	09/23/22 23:07	1
o-Terphenyl	102		70 - 130			09/22/22 11:26	09/23/22 23:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29.9		4.99	mg/Kg			09/24/22 21:48	1

Client Sample ID: PH02

Lab Sample ID: 890-3015-3

Date Collected: 09/20/22 09:25

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+ *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 10:01	1
Toluene	<0.00199	U *+ *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 10:01	1
Ethylbenzene	<0.00199	U *+ *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 10:01	1
m-Xylene & p-Xylene	<0.00398	U *+ *1	0.00398	mg/Kg		09/29/22 16:18	10/03/22 10:01	1
o-Xylene	<0.00199	U *+ *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 10:01	1
Xylenes, Total	<0.00398	U *+ *1	0.00398	mg/Kg		09/29/22 16:18	10/03/22 10:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	09/29/22 16:18	10/03/22 10:01	1
1,4-Difluorobenzene (Surr)	113		70 - 130	09/29/22 16:18	10/03/22 10:01	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/03/22 15:02	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			09/26/22 13:20	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH02

Lab Sample ID: 890-3015-3

Date Collected: 09/20/22 09:25

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/22/22 11:27	09/23/22 23:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/22/22 11:27	09/23/22 23:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/22/22 11:27	09/23/22 23:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			09/22/22 11:27	09/23/22 23:28	1
o-Terphenyl	78		70 - 130			09/22/22 11:27	09/23/22 23:28	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.7		5.02	mg/Kg			09/24/22 21:53	1

Client Sample ID: PH02A

Lab Sample ID: 890-3015-4

Date Collected: 09/20/22 09:45

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U ** *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 10:22	1
Toluene	<0.00201	U ** *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 10:22	1
Ethylbenzene	<0.00201	U ** *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 10:22	1
m-Xylene & p-Xylene	<0.00402	U ** *1	0.00402	mg/Kg		09/29/22 16:18	10/03/22 10:22	1
o-Xylene	<0.00201	U ** *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 10:22	1
Xylenes, Total	<0.00402	U ** *1	0.00402	mg/Kg		09/29/22 16:18	10/03/22 10:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130			09/29/22 16:18	10/03/22 10:22	1
1,4-Difluorobenzene (Surr)	101		70 - 130			09/29/22 16:18	10/03/22 10:22	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			10/03/22 15:02	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			09/26/22 13:20	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		09/22/22 11:27	09/23/22 23:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/22/22 11:27	09/23/22 23:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/22/22 11:27	09/23/22 23:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			09/22/22 11:27	09/23/22 23:50	1
o-Terphenyl	99		70 - 130			09/22/22 11:27	09/23/22 23:50	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH02A

Lab Sample ID: 890-3015-4

Date Collected: 09/20/22 09:45

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.3		5.05	mg/Kg			09/24/22 21:59	1

Client Sample ID: PH03

Lab Sample ID: 890-3015-5

Date Collected: 09/20/22 09:55

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+ *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 10:43	1
Toluene	<0.00200	U *+ *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 10:43	1
Ethylbenzene	<0.00200	U *+ *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 10:43	1
m-Xylene & p-Xylene	<0.00401	U *+ *1	0.00401	mg/Kg		09/29/22 16:18	10/03/22 10:43	1
o-Xylene	<0.00200	U *+ *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 10:43	1
Xylenes, Total	<0.00401	U *+ *1	0.00401	mg/Kg		09/29/22 16:18	10/03/22 10:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130			09/29/22 16:18	10/03/22 10:43	1
1,4-Difluorobenzene (Surr)	107		70 - 130			09/29/22 16:18	10/03/22 10:43	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			10/03/22 15:02	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			09/26/22 13:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/22/22 11:27	09/24/22 00:12	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/22/22 11:27	09/24/22 00:12	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/22/22 11:27	09/24/22 00:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130			09/22/22 11:27	09/24/22 00:12	1
o-Terphenyl	115		70 - 130			09/22/22 11:27	09/24/22 00:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	748		5.05	mg/Kg			09/24/22 22:04	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH03A

Lab Sample ID: 890-3015-6

Date Collected: 09/20/22 10:10

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U ** *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 11:03	1
Toluene	<0.00199	U ** *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 11:03	1
Ethylbenzene	<0.00199	U ** *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 11:03	1
m-Xylene & p-Xylene	<0.00398	U ** *1	0.00398	mg/Kg		09/29/22 16:18	10/03/22 11:03	1
o-Xylene	<0.00199	U ** *1	0.00199	mg/Kg		09/29/22 16:18	10/03/22 11:03	1
Xylenes, Total	<0.00398	U ** *1	0.00398	mg/Kg		09/29/22 16:18	10/03/22 11:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130	09/29/22 16:18	10/03/22 11:03	1
1,4-Difluorobenzene (Surr)	105		70 - 130	09/29/22 16:18	10/03/22 11:03	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/03/22 15:02	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			09/26/22 13:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/22/22 11:27	09/24/22 00:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/22/22 11:27	09/24/22 00:33	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/22/22 11:27	09/24/22 00:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	09/22/22 11:27	09/24/22 00:33	1
o-Terphenyl	109		70 - 130	09/22/22 11:27	09/24/22 00:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	94.1		5.00	mg/Kg			09/24/22 22:21	1

Client Sample ID: PH04

Lab Sample ID: 890-3015-7

Date Collected: 09/20/22 10:15

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 11:24	1
Toluene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 11:24	1
Ethylbenzene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 11:24	1
m-Xylene & p-Xylene	<0.00401	U ** *1	0.00401	mg/Kg		09/29/22 16:18	10/03/22 11:24	1
o-Xylene	<0.00200	U ** *1	0.00200	mg/Kg		09/29/22 16:18	10/03/22 11:24	1
Xylenes, Total	<0.00401	U ** *1	0.00401	mg/Kg		09/29/22 16:18	10/03/22 11:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	09/29/22 16:18	10/03/22 11:24	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH04

Lab Sample ID: 890-3015-7

Date Collected: 09/20/22 10:15

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102		70 - 130	09/29/22 16:18	10/03/22 11:24	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			10/03/22 15:02	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			09/26/22 13:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/22/22 11:27	09/24/22 00:55	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/22/22 11:27	09/24/22 00:55	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/22/22 11:27	09/24/22 00:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			09/22/22 11:27	09/24/22 00:55	1
o-Terphenyl	94		70 - 130			09/22/22 11:27	09/24/22 00:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.49		4.96	mg/Kg			09/24/22 22:26	1

Client Sample ID: PH04A

Lab Sample ID: 890-3015-8

Date Collected: 09/20/22 10:35

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+ *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 11:45	1
Toluene	<0.00201	U *+ *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 11:45	1
Ethylbenzene	<0.00201	U *+ *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 11:45	1
m-Xylene & p-Xylene	<0.00402	U *+ *1	0.00402	mg/Kg		09/29/22 16:18	10/03/22 11:45	1
o-Xylene	<0.00201	U *+ *1	0.00201	mg/Kg		09/29/22 16:18	10/03/22 11:45	1
Xylenes, Total	<0.00402	U *+ *1	0.00402	mg/Kg		09/29/22 16:18	10/03/22 11:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	09/29/22 16:18	10/03/22 11:45	1
1,4-Difluorobenzene (Surr)	100		70 - 130	09/29/22 16:18	10/03/22 11:45	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			10/03/22 15:02	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			09/26/22 13:20	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH04A

Lab Sample ID: 890-3015-8

Date Collected: 09/20/22 10:35

Matrix: Solid

Date Received: 09/20/22 15:18

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/22/22 11:27	09/24/22 01:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/22/22 11:27	09/24/22 01:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/22/22 11:27	09/24/22 01:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130			09/22/22 11:27	09/24/22 01:17	1
o-Terphenyl	113		70 - 130			09/22/22 11:27	09/24/22 01:17	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.90		4.99	mg/Kg			09/24/22 22:31	1

Surrogate Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

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)
890-3015-1	PH01	116	91
890-3015-1 MS	PH01	101	94
890-3015-1 MSD	PH01	108	107
890-3015-2	PH01A	122	101
890-3015-3	PH02	133 S1+	113
890-3015-4	PH02A	127	101
890-3015-5	PH03	126	107
890-3015-6	PH03A	129	105
890-3015-7	PH04	128	102
890-3015-8	PH04A	123	100
LCS 880-35724/1-A	Lab Control Sample	76	73
LCSD 880-35724/2-A	Lab Control Sample Dup	128	123
MB 880-35692/5-A	Method Blank	99	83
MB 880-35724/5-A	Method Blank	100	76
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)
890-3010-A-2-C MS	Matrix Spike	90	88
890-3010-A-2-D MSD	Matrix Spike Duplicate	103	99
890-3015-1	PH01	97	105
890-3015-2	PH01A	95	102
890-3015-3	PH02	80	78
890-3015-4	PH02A	92	99
890-3015-5	PH03	110	115
890-3015-6	PH03A	102	109
890-3015-7	PH04	95	94
890-3015-8	PH04A	107	113
LCS 880-35172/2-A	Lab Control Sample	99	105
LCSD 880-35172/3-A	Lab Control Sample Dup	106	108
MB 880-35172/1-A	Method Blank	120	139 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-35692/5-A

Matrix: Solid

Analysis Batch: 35890

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35692

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/29/22 11:56	10/02/22 22:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/29/22 11:56	10/02/22 22:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/29/22 11:56	10/02/22 22:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/29/22 11:56	10/02/22 22:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/29/22 11:56	10/02/22 22:18	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/29/22 11:56	10/02/22 22:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	09/29/22 11:56	10/02/22 22:18	1
1,4-Difluorobenzene (Surr)	83		70 - 130	09/29/22 11:56	10/02/22 22:18	1

Lab Sample ID: MB 880-35724/5-A

Matrix: Solid

Analysis Batch: 35890

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35724

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/29/22 16:18	10/03/22 08:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/29/22 16:18	10/03/22 08:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/29/22 16:18	10/03/22 08:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/29/22 16:18	10/03/22 08:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/29/22 16:18	10/03/22 08:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/29/22 16:18	10/03/22 08:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	09/29/22 16:18	10/03/22 08:58	1
1,4-Difluorobenzene (Surr)	76		70 - 130	09/29/22 16:18	10/03/22 08:58	1

Lab Sample ID: LCS 880-35724/1-A

Matrix: Solid

Analysis Batch: 35890

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 35724

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07829		mg/Kg		78	70 - 130
Toluene	0.100	0.08089		mg/Kg		81	70 - 130
Ethylbenzene	0.100	0.07734		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	0.200	0.1621		mg/Kg		81	70 - 130
o-Xylene	0.100	0.08300		mg/Kg		83	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	76		70 - 130
1,4-Difluorobenzene (Surr)	73		70 - 130

Lab Sample ID: LCSD 880-35724/2-A

Matrix: Solid

Analysis Batch: 35890

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 35724

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1318	*+ *1	mg/Kg		132	70 - 130	51	35

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

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

Lab Sample ID: LCSD 880-35724/2-A

Matrix: Solid

Analysis Batch: 35890

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 35724

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.1408	*+ *1	mg/Kg		141	70 - 130	54	35
Ethylbenzene	0.100	0.1312	*+ *1	mg/Kg		131	70 - 130	52	35
m-Xylene & p-Xylene	0.200	0.2759	*+ *1	mg/Kg		138	70 - 130	52	35
o-Xylene	0.100	0.1422	*+ *1	mg/Kg		142	70 - 130	53	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	123		70 - 130

Lab Sample ID: 890-3015-1 MS

Matrix: Solid

Analysis Batch: 35890

Client Sample ID: PH01

Prep Type: Total/NA

Prep Batch: 35724

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U *+ *1	0.0998	0.09073		mg/Kg		91	70 - 130
Toluene	<0.00200	U *+ *1	0.0998	0.09593		mg/Kg		96	70 - 130
Ethylbenzene	<0.00200	U *+ *1	0.0998	0.08487		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00401	U *+ *1	0.200	0.1756		mg/Kg		88	70 - 130
o-Xylene	<0.00200	U *+ *1	0.0998	0.09418		mg/Kg		94	70 - 130

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

Lab Sample ID: 890-3015-1 MSD

Matrix: Solid

Analysis Batch: 35890

Client Sample ID: PH01

Prep Type: Total/NA

Prep Batch: 35724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U *+ *1	0.0990	0.09916		mg/Kg		100	70 - 130	9	35
Toluene	<0.00200	U *+ *1	0.0990	0.1009		mg/Kg		102	70 - 130	5	35
Ethylbenzene	<0.00200	U *+ *1	0.0990	0.08894		mg/Kg		90	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U *+ *1	0.198	0.1820		mg/Kg		92	70 - 130	4	35
o-Xylene	<0.00200	U *+ *1	0.0990	0.09773		mg/Kg		99	70 - 130	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-35172/1-A

Matrix: Solid

Analysis Batch: 35220

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35172

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		09/22/22 11:26	09/23/22 20:35	1

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

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

Lab Sample ID: MB 880-35172/1-A

Matrix: Solid

Analysis Batch: 35220

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35172

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		09/22/22 11:26	09/23/22 20:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/22/22 11:26	09/23/22 20:35	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130			09/22/22 11:26	09/23/22 20:35	1
o-Terphenyl	139	S1+	70 - 130			09/22/22 11:26	09/23/22 20:35	1

Lab Sample ID: LCS 880-35172/2-A

Matrix: Solid

Analysis Batch: 35220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 35172

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	960.3		mg/Kg		96	70 - 130
Diesel Range Organics (Over C10-C28)	1000	891.9		mg/Kg		89	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	99		70 - 130				
o-Terphenyl	105		70 - 130				

Lab Sample ID: LCSD 880-35172/3-A

Matrix: Solid

Analysis Batch: 35220

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 35172

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	960.5		mg/Kg		96	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	951.2		mg/Kg		95	70 - 130	6	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	106		70 - 130						
o-Terphenyl	108		70 - 130						

Lab Sample ID: 890-3010-A-2-C MS

Matrix: Solid

Analysis Batch: 35220

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 35172

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	887.9		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	998.1		mg/Kg		100	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	90		70 - 130						
o-Terphenyl	88		70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

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

Lab Sample ID: 890-3010-A-2-D MSD

Matrix: Solid

Analysis Batch: 35220

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 35172

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	1050		mg/Kg		103	70 - 130	17	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1135		mg/Kg		114	70 - 130	13	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	103		70 - 130								
o-Terphenyl	99		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-35175/1-A

Matrix: Solid

Analysis Batch: 35309

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			09/24/22 21:16	1

Lab Sample ID: LCS 880-35175/2-A

Matrix: Solid

Analysis Batch: 35309

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	273.5		mg/Kg		109	90 - 110

Lab Sample ID: LCSD 880-35175/3-A

Matrix: Solid

Analysis Batch: 35309

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	266.4		mg/Kg		107	90 - 110	3	20

Lab Sample ID: 890-3015-1 MS

Matrix: Solid

Analysis Batch: 35309

Client Sample ID: PH01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1470	F1	1250	2790		mg/Kg		106	90 - 110

Lab Sample ID: 890-3015-1 MSD

Matrix: Solid

Analysis Batch: 35309

Client Sample ID: PH01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1470	F1	1250	2906	F1	mg/Kg		115	90 - 110	4	20

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

GC VOA

Prep Batch: 35692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-35692/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 35724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Total/NA	Solid	5035	
890-3015-2	PH01A	Total/NA	Solid	5035	
890-3015-3	PH02	Total/NA	Solid	5035	
890-3015-4	PH02A	Total/NA	Solid	5035	
890-3015-5	PH03	Total/NA	Solid	5035	
890-3015-6	PH03A	Total/NA	Solid	5035	
890-3015-7	PH04	Total/NA	Solid	5035	
890-3015-8	PH04A	Total/NA	Solid	5035	
MB 880-35724/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-35724/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-35724/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3015-1 MS	PH01	Total/NA	Solid	5035	
890-3015-1 MSD	PH01	Total/NA	Solid	5035	

Analysis Batch: 35890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Total/NA	Solid	8021B	35724
890-3015-2	PH01A	Total/NA	Solid	8021B	35724
890-3015-3	PH02	Total/NA	Solid	8021B	35724
890-3015-4	PH02A	Total/NA	Solid	8021B	35724
890-3015-5	PH03	Total/NA	Solid	8021B	35724
890-3015-6	PH03A	Total/NA	Solid	8021B	35724
890-3015-7	PH04	Total/NA	Solid	8021B	35724
890-3015-8	PH04A	Total/NA	Solid	8021B	35724
MB 880-35692/5-A	Method Blank	Total/NA	Solid	8021B	35692
MB 880-35724/5-A	Method Blank	Total/NA	Solid	8021B	35724
LCS 880-35724/1-A	Lab Control Sample	Total/NA	Solid	8021B	35724
LCSD 880-35724/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	35724
890-3015-1 MS	PH01	Total/NA	Solid	8021B	35724
890-3015-1 MSD	PH01	Total/NA	Solid	8021B	35724

Analysis Batch: 36010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Total/NA	Solid	Total BTEX	
890-3015-2	PH01A	Total/NA	Solid	Total BTEX	
890-3015-3	PH02	Total/NA	Solid	Total BTEX	
890-3015-4	PH02A	Total/NA	Solid	Total BTEX	
890-3015-5	PH03	Total/NA	Solid	Total BTEX	
890-3015-6	PH03A	Total/NA	Solid	Total BTEX	
890-3015-7	PH04	Total/NA	Solid	Total BTEX	
890-3015-8	PH04A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 35172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

GC Semi VOA (Continued)

Prep Batch: 35172 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-2	PH01A	Total/NA	Solid	8015NM Prep	
890-3015-3	PH02	Total/NA	Solid	8015NM Prep	
890-3015-4	PH02A	Total/NA	Solid	8015NM Prep	
890-3015-5	PH03	Total/NA	Solid	8015NM Prep	
890-3015-6	PH03A	Total/NA	Solid	8015NM Prep	
890-3015-7	PH04	Total/NA	Solid	8015NM Prep	
890-3015-8	PH04A	Total/NA	Solid	8015NM Prep	
MB 880-35172/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35172/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35172/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3010-A-2-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3010-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 35220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Total/NA	Solid	8015B NM	35172
890-3015-2	PH01A	Total/NA	Solid	8015B NM	35172
890-3015-3	PH02	Total/NA	Solid	8015B NM	35172
890-3015-4	PH02A	Total/NA	Solid	8015B NM	35172
890-3015-5	PH03	Total/NA	Solid	8015B NM	35172
890-3015-6	PH03A	Total/NA	Solid	8015B NM	35172
890-3015-7	PH04	Total/NA	Solid	8015B NM	35172
890-3015-8	PH04A	Total/NA	Solid	8015B NM	35172
MB 880-35172/1-A	Method Blank	Total/NA	Solid	8015B NM	35172
LCS 880-35172/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35172
LCSD 880-35172/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35172
890-3010-A-2-C MS	Matrix Spike	Total/NA	Solid	8015B NM	35172
890-3010-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	35172

Analysis Batch: 35413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Total/NA	Solid	8015 NM	
890-3015-2	PH01A	Total/NA	Solid	8015 NM	
890-3015-3	PH02	Total/NA	Solid	8015 NM	
890-3015-4	PH02A	Total/NA	Solid	8015 NM	
890-3015-5	PH03	Total/NA	Solid	8015 NM	
890-3015-6	PH03A	Total/NA	Solid	8015 NM	
890-3015-7	PH04	Total/NA	Solid	8015 NM	
890-3015-8	PH04A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 35175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Soluble	Solid	DI Leach	
890-3015-2	PH01A	Soluble	Solid	DI Leach	
890-3015-3	PH02	Soluble	Solid	DI Leach	
890-3015-4	PH02A	Soluble	Solid	DI Leach	
890-3015-5	PH03	Soluble	Solid	DI Leach	
890-3015-6	PH03A	Soluble	Solid	DI Leach	
890-3015-7	PH04	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

HPLC/IC (Continued)

Leach Batch: 35175 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-8	PH04A	Soluble	Solid	DI Leach	
MB 880-35175/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-35175/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-35175/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3015-1 MS	PH01	Soluble	Solid	DI Leach	
890-3015-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 35309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3015-1	PH01	Soluble	Solid	300.0	35175
890-3015-2	PH01A	Soluble	Solid	300.0	35175
890-3015-3	PH02	Soluble	Solid	300.0	35175
890-3015-4	PH02A	Soluble	Solid	300.0	35175
890-3015-5	PH03	Soluble	Solid	300.0	35175
890-3015-6	PH03A	Soluble	Solid	300.0	35175
890-3015-7	PH04	Soluble	Solid	300.0	35175
890-3015-8	PH04A	Soluble	Solid	300.0	35175
MB 880-35175/1-A	Method Blank	Soluble	Solid	300.0	35175
LCS 880-35175/2-A	Lab Control Sample	Soluble	Solid	300.0	35175
LCSD 880-35175/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	35175
890-3015-1 MS	PH01	Soluble	Solid	300.0	35175
890-3015-1 MSD	PH01	Soluble	Solid	300.0	35175

Lab Chronicle

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH01

Lab Sample ID: 890-3015-1

Date Collected: 09/20/22 09:00

Matrix: Solid

Date Received: 09/20/22 15:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 09:20	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	35172	09/22/22 11:26	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/23/22 22:45	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		5			35309	09/24/22 21:32	CH	EET MID

Client Sample ID: PH01A

Lab Sample ID: 890-3015-2

Date Collected: 09/20/22 09:20

Matrix: Solid

Date Received: 09/20/22 15:18

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	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 09:41	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	35172	09/22/22 11:26	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/23/22 23:07	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		1			35309	09/24/22 21:48	CH	EET MID

Client Sample ID: PH02

Lab Sample ID: 890-3015-3

Date Collected: 09/20/22 09:25

Matrix: Solid

Date Received: 09/20/22 15:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 10:01	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35172	09/22/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/23/22 23:28	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		1			35309	09/24/22 21:53	CH	EET MID

Client Sample ID: PH02A

Lab Sample ID: 890-3015-4

Date Collected: 09/20/22 09:45

Matrix: Solid

Date Received: 09/20/22 15:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 10:22	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH02A

Lab Sample ID: 890-3015-4

Date Collected: 09/20/22 09:45

Matrix: Solid

Date Received: 09/20/22 15:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35172	09/22/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/23/22 23:50	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		1			35309	09/24/22 21:59	CH	EET MID

Client Sample ID: PH03

Lab Sample ID: 890-3015-5

Date Collected: 09/20/22 09:55

Matrix: Solid

Date Received: 09/20/22 15:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 10:43	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	35172	09/22/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/24/22 00:12	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		1			35309	09/24/22 22:04	CH	EET MID

Client Sample ID: PH03A

Lab Sample ID: 890-3015-6

Date Collected: 09/20/22 10:10

Matrix: Solid

Date Received: 09/20/22 15:18

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	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 11:03	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	35172	09/22/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/24/22 00:33	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		1			35309	09/24/22 22:21	CH	EET MID

Client Sample ID: PH04

Lab Sample ID: 890-3015-7

Date Collected: 09/20/22 10:15

Matrix: Solid

Date Received: 09/20/22 15:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 11:24	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	35172	09/22/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/24/22 00:55	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Client Sample ID: PH04
Date Collected: 09/20/22 10:15
Date Received: 09/20/22 15:18

Lab Sample ID: 890-3015-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		1			35309	09/24/22 22:26	CH	EET MID

Client Sample ID: PH04A
Date Collected: 09/20/22 10:35
Date Received: 09/20/22 15:18

Lab Sample ID: 890-3015-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	35724	09/29/22 16:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	35890	10/03/22 11:45	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36010	10/03/22 15:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			35413	09/26/22 13:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	35172	09/22/22 11:27	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35220	09/24/22 01:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	35175	09/22/22 12:03	SMC	EET MID
Soluble	Analysis	300.0		1			35309	09/24/22 22:31	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: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

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

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

Method Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

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: EMSU Satellite Battery #10

Job ID: 890-3015-1
SDG: 03C2077001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3015-1	PH01	Solid	09/20/22 09:00	09/20/22 15:18	0.5
890-3015-2	PH01A	Solid	09/20/22 09:20	09/20/22 15:18	4
890-3015-3	PH02	Solid	09/20/22 09:25	09/20/22 15:18	0.5
890-3015-4	PH02A	Solid	09/20/22 09:45	09/20/22 15:18	4
890-3015-5	PH03	Solid	09/20/22 09:55	09/20/22 15:18	1
890-3015-6	PH03A	Solid	09/20/22 10:10	09/20/22 15:18	4
890-3015-7	PH04	Solid	09/20/22 10:15	09/20/22 15:18	0.5
890-3015-8	PH04A	Solid	09/20/22 10:35	09/20/22 15:18	4



Environment Testing
Xenco

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

Chain of Custody

Work Order No:

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Tacoma Morrissey
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	303-887-2946	Email:	imorrissey@ensolum.com shyde@ensolum.com

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

Project Name:		EMSU Satellite Battery #10		Turn Around		Prea. Code		ANALYSIS REQUEST										Preservative Codes															
Project Number:		03C2077001		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush														None: NO				DI Water: H ₂ O											
Project Location:		32 481208 -103 273891		Due Date:														Cool: Cool				MeOH: Me											
Sampler's Name:		Kase Parker		TAT starts the day received by the lab. If received by 4:30pm														HCL: HC				HNO ₃ : HN											
PO #:																		H ₂ SO ₄ : H ₂				NaOH: Na											
SAMPLE RECEIPT				Temp Blank:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Thermometer ID:		7144007		Wet Ice:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No												H ₃ PO ₄ : HP							
Samples Received Intact:				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Correction Factor:		-0.0												NaHSO ₄ : NABIS											
Cooler Custody Seals:				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		N/A		Temperature Reading:		6.0												Na ₂ S ₂ O ₃ : NaSO ₃											
Sample Custody Seals:				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Corrected Temperature:		5.8												Zn Acetate+NaOH: Zn											
Total Containers:																						NaOH+Ascorbic Acid: SACP											

[illegible][illegible]

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	9-20-22 15:18			

Revised Date 08/23/2020 Rev 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3015-1

SDG Number: 03C2077001

Login Number: 3015

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: 890-3015-1

SDG Number: 03C2077001

Login Number: 3015

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 09/22/22 11:12 AM

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



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-3112-1

Laboratory Sample Delivery Group: 03C2077001

Client Project/Site: EMSU Satellite Battery #10

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

10/10/2022 10:11:24 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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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: EMSU Satellite Battery #10

Laboratory Job ID: 890-3112-1
SDG: 03C2077001

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Definitions/Glossary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Eurofins Carlsbad

Case Narrative

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Job ID: 890-3112-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-3112-1****Receipt**

The samples were received on 9/29/2022 1:19 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 14.0°C

GC VOA

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-36449 and analytical batch 880-36442 recovered outside control limits for the following analytes: Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene Due to a misinjection.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH05A (890-3112-2), PH06 (890-3112-3) and (LCS 880-36449/1-A). Evidence of matrix interferences is not obvious.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-35915/2-A) and (LCSD 880-35915/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-3112-A-1-B MS) and (890-3112-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

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

Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Client Sample ID: PH05

Lab Sample ID: 890-3112-1

Date Collected: 09/29/22 08:50

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 08:33	1
Toluene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 08:33	1
Ethylbenzene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 08:33	1
m-Xylene & p-Xylene	<0.00401	U *- *1	0.00401	mg/Kg		10/08/22 12:21	10/09/22 08:33	1
o-Xylene	<0.00200	U *+ *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 08:33	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		10/08/22 12:21	10/09/22 08:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	10/08/22 12:21	10/09/22 08:33	1
1,4-Difluorobenzene (Surr)	73		70 - 130	10/08/22 12:21	10/09/22 08:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			10/10/22 10:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/04/22 09:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 11:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 11:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 11:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	10/03/22 08:31	10/03/22 11:03	1
o-Terphenyl	88		70 - 130	10/03/22 08:31	10/03/22 11:03	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	269		4.97	mg/Kg			10/06/22 13:06	1

Client Sample ID: PH05A

Lab Sample ID: 890-3112-2

Date Collected: 09/29/22 08:55

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 08:54	1
Toluene	<0.00199	U *- *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 08:54	1
Ethylbenzene	<0.00199	U *- *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 08:54	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398	mg/Kg		10/08/22 12:21	10/09/22 08:54	1
o-Xylene	<0.00199	U *+ *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 08:54	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/08/22 12:21	10/09/22 08:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	10/08/22 12:21	10/09/22 08:54	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Client Sample ID: PH05A

Lab Sample ID: 890-3112-2

Date Collected: 09/29/22 08:55

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130	10/08/22 12:21	10/09/22 08:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/10/22 10:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			10/04/22 09:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		10/03/22 08:31	10/03/22 12:05	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		10/03/22 08:31	10/03/22 12:05	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		10/03/22 08:31	10/03/22 12:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130			10/03/22 08:31	10/03/22 12:05	1
o-Terphenyl	81		70 - 130			10/03/22 08:31	10/03/22 12:05	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	775		4.95	mg/Kg			10/06/22 13:12	1

Client Sample ID: PH06

Lab Sample ID: 890-3112-3

Date Collected: 09/29/22 09:00

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 09:14	1
Toluene	<0.00199	U *- *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 09:14	1
Ethylbenzene	<0.00199	U *- *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 09:14	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398	mg/Kg		10/08/22 12:21	10/09/22 09:14	1
o-Xylene	<0.00199	U *- *1	0.00199	mg/Kg		10/08/22 12:21	10/09/22 09:14	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/08/22 12:21	10/09/22 09:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130	10/08/22 12:21	10/09/22 09:14	1
1,4-Difluorobenzene (Surr)	100		70 - 130	10/08/22 12:21	10/09/22 09:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/10/22 10:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/04/22 09:15	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Client Sample ID: PH06

Lab Sample ID: 890-3112-3

Date Collected: 09/29/22 09:00

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/03/22 08:31	10/03/22 12:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/03/22 08:31	10/03/22 12:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/03/22 08:31	10/03/22 12:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130			10/03/22 08:31	10/03/22 12:25	1
o-Terphenyl	83		70 - 130			10/03/22 08:31	10/03/22 12:25	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	92.4		5.01	mg/Kg			10/06/22 13:17	1

Client Sample ID: PH06A

Lab Sample ID: 890-3112-4

Date Collected: 09/29/22 09:05

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 09:35	1
Toluene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 09:35	1
Ethylbenzene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 09:35	1
m-Xylene & p-Xylene	<0.00400	U *- *1	0.00400	mg/Kg		10/08/22 12:21	10/09/22 09:35	1
o-Xylene	<0.00200	U *+ *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 09:35	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/08/22 12:21	10/09/22 09:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130			10/08/22 12:21	10/09/22 09:35	1
1,4-Difluorobenzene (Surr)	82		70 - 130			10/08/22 12:21	10/09/22 09:35	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			10/10/22 10:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/04/22 09:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/03/22 08:31	10/03/22 12:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/03/22 08:31	10/03/22 12:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/03/22 08:31	10/03/22 12:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			10/03/22 08:31	10/03/22 12:46	1
o-Terphenyl	83		70 - 130			10/03/22 08:31	10/03/22 12:46	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Client Sample ID: PH06A

Lab Sample ID: 890-3112-4

Date Collected: 09/29/22 09:05

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 2'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	408		4.97	mg/Kg			10/06/22 13:35	1

Client Sample ID: PH07

Lab Sample ID: 890-3112-5

Date Collected: 09/29/22 09:15

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U * *1	0.00202	mg/Kg		10/08/22 12:21	10/09/22 09:55	1
Toluene	<0.00202	U * *1	0.00202	mg/Kg		10/08/22 12:21	10/09/22 09:55	1
Ethylbenzene	<0.00202	U * *1	0.00202	mg/Kg		10/08/22 12:21	10/09/22 09:55	1
m-Xylene & p-Xylene	<0.00404	U * *1	0.00404	mg/Kg		10/08/22 12:21	10/09/22 09:55	1
o-Xylene	<0.00202	U * *1	0.00202	mg/Kg		10/08/22 12:21	10/09/22 09:55	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		10/08/22 12:21	10/09/22 09:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130			10/08/22 12:21	10/09/22 09:55	1
1,4-Difluorobenzene (Surr)	99		70 - 130			10/08/22 12:21	10/09/22 09:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			10/10/22 10:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/04/22 09:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 13:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 13:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 13:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			10/03/22 08:31	10/03/22 13:06	1
o-Terphenyl	90		70 - 130			10/03/22 08:31	10/03/22 13:06	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	284		5.00	mg/Kg			10/06/22 13:41	1

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Client Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Client Sample ID: PH07A

Lab Sample ID: 890-3112-6

Date Collected: 09/29/22 09:20

Matrix: Solid

Date Received: 09/29/22 13:19

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 10:16	1
Toluene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 10:16	1
Ethylbenzene	<0.00200	U *- *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 10:16	1
m-Xylene & p-Xylene	<0.00399	U *- *1	0.00399	mg/Kg		10/08/22 12:21	10/09/22 10:16	1
o-Xylene	<0.00200	U *+ *1	0.00200	mg/Kg		10/08/22 12:21	10/09/22 10:16	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/08/22 12:21	10/09/22 10:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130			10/08/22 12:21	10/09/22 10:16	1
1,4-Difluorobenzene (Surr)	94		70 - 130			10/08/22 12:21	10/09/22 10:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/10/22 10:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/04/22 09:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 13:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 13:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 13:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130			10/03/22 08:31	10/03/22 13:27	1
o-Terphenyl	97		70 - 130			10/03/22 08:31	10/03/22 13:27	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	758		4.96	mg/Kg			10/06/22 13:58	1

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Surrogate Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

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)
890-3089-A-1-F MS	Matrix Spike	106	91
890-3089-A-1-G MSD	Matrix Spike Duplicate	96	81
890-3112-1	PH05	78	73
890-3112-2	PH05A	78	69 S1-
890-3112-3	PH06	66 S1-	100
890-3112-4	PH06A	83	82
890-3112-5	PH07	74	99
890-3112-6	PH07A	74	94
LCS 880-36449/1-A	Lab Control Sample	171 S1+	117
LCSD 880-36449/2-A	Lab Control Sample Dup	98	94
MB 880-36293/5-A	Method Blank	83	92
MB 880-36449/5-A	Method Blank	87	87
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)
890-3112-1	PH05	84	88
890-3112-1 MS	PH05	72	67 S1-
890-3112-1 MSD	PH05	72	66 S1-
890-3112-2	PH05A	76	81
890-3112-3	PH06	81	83
890-3112-4	PH06A	78	83
890-3112-5	PH07	85	90
890-3112-6	PH07A	91	97
LCS 880-35915/2-A	Lab Control Sample	122	131 S1+
LCSD 880-35915/3-A	Lab Control Sample Dup	129	139 S1+
MB 880-35915/1-A	Method Blank	106	118
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36293/5-A

Matrix: Solid

Analysis Batch: 36442

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36293

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/06/22 15:51	10/08/22 15:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/06/22 15:51	10/08/22 15:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/06/22 15:51	10/08/22 15:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/06/22 15:51	10/08/22 15:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/06/22 15:51	10/08/22 15:47	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/06/22 15:51	10/08/22 15:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	10/06/22 15:51	10/08/22 15:47	1
1,4-Difluorobenzene (Surr)	92		70 - 130	10/06/22 15:51	10/08/22 15:47	1

Lab Sample ID: MB 880-36449/5-A

Matrix: Solid

Analysis Batch: 36442

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 36449

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/08/22 12:21	10/09/22 02:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/08/22 12:21	10/09/22 02:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/08/22 12:21	10/09/22 02:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/08/22 12:21	10/09/22 02:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/08/22 12:21	10/09/22 02:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/08/22 12:21	10/09/22 02:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130	10/08/22 12:21	10/09/22 02:23	1
1,4-Difluorobenzene (Surr)	87		70 - 130	10/08/22 12:21	10/09/22 02:23	1

Lab Sample ID: LCS 880-36449/1-A

Matrix: Solid

Analysis Batch: 36442

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 36449

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.01884	*-	mg/Kg		19	70 - 130
Toluene	0.100	0.01832	*-	mg/Kg		18	70 - 130
Ethylbenzene	0.100	0.02039	*-	mg/Kg		20	70 - 130
m-Xylene & p-Xylene	0.200	0.05373	*-	mg/Kg		27	70 - 130
o-Xylene	0.100	0.3177	*+	mg/Kg		318	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	171	S1+	70 - 130
1,4-Difluorobenzene (Surr)	117		70 - 130

Lab Sample ID: LCSD 880-36449/2-A

Matrix: Solid

Analysis Batch: 36442

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 36449

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09908	*1	mg/Kg		99	70 - 130	136	35

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

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

Lab Sample ID: LCSD 880-36449/2-A

Matrix: Solid

Analysis Batch: 36442

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 36449

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08768	*1	mg/Kg		88	70 - 130	131	35
Ethylbenzene	0.100	0.08396	*1	mg/Kg		84	70 - 130	122	35
m-Xylene & p-Xylene	0.200	0.1727	*1	mg/Kg		86	70 - 130	105	35
o-Xylene	0.100	0.09883	*1	mg/Kg		99	70 - 130	105	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-3089-A-1-F MS

Matrix: Solid

Analysis Batch: 36442

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 36449

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U *- *1 F1	0.0998	0.04456	F1	mg/Kg		45	70 - 130
Toluene	<0.00202	U *- *1 F1	0.0998	0.04470	F1	mg/Kg		45	70 - 130
Ethylbenzene	<0.00202	U *- *1 F1	0.0998	0.04470	F1	mg/Kg		45	70 - 130
m-Xylene & p-Xylene	<0.00403	U *- *1 F1	0.200	0.07327	F1	mg/Kg		37	70 - 130
o-Xylene	<0.00202	U + *1 F1	0.0998	0.04861	F1	mg/Kg		49	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

Lab Sample ID: 890-3089-A-1-G MSD

Matrix: Solid

Analysis Batch: 36442

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 36449

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *- *1 F1	0.101	0.03882	F1	mg/Kg		39	70 - 130	14	35
Toluene	<0.00202	U *- *1 F1	0.101	0.04506	F1	mg/Kg		45	70 - 130	1	35
Ethylbenzene	<0.00202	U *- *1 F1	0.101	0.04374	F1	mg/Kg		43	70 - 130	2	35
m-Xylene & p-Xylene	<0.00403	U *- *1 F1	0.201	0.06634	F1	mg/Kg		33	70 - 130	10	35
o-Xylene	<0.00202	U + *1 F1	0.101	0.04504	F1	mg/Kg		45	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	81		70 - 130

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

Lab Sample ID: MB 880-35915/1-A

Matrix: Solid

Analysis Batch: 35895

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35915

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 09:56	1

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

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

Lab Sample ID: MB 880-35915/1-A

Matrix: Solid

Analysis Batch: 35895

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35915

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		10/03/22 08:31	10/03/22 09:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/03/22 08:31	10/03/22 09:56	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130			10/03/22 08:31	10/03/22 09:56	1
o-Terphenyl	118		70 - 130			10/03/22 08:31	10/03/22 09:56	1

Lab Sample ID: LCS 880-35915/2-A

Matrix: Solid

Analysis Batch: 35895

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 35915

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1044		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1062		mg/Kg		106	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	122		70 - 130				
o-Terphenyl	131	S1+	70 - 130				

Lab Sample ID: LCSD 880-35915/3-A

Matrix: Solid

Analysis Batch: 35895

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 35915

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1064		mg/Kg		106	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1157		mg/Kg		116	70 - 130	9	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	129		70 - 130						
o-Terphenyl	139	S1+	70 - 130						

Lab Sample ID: 890-3112-1 MS

Matrix: Solid

Analysis Batch: 35895

Client Sample ID: PH05

Prep Type: Total/NA

Prep Batch: 35915

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	881.5		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	796.4		mg/Kg		78	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	72		70 - 130						
o-Terphenyl	67	S1-	70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

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

Lab Sample ID: 890-3112-1 MSD

Matrix: Solid

Analysis Batch: 35895

Client Sample ID: PH05

Prep Type: Total/NA

Prep Batch: 35915

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	845.9		mg/Kg		83	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	794.2		mg/Kg		77	70 - 130	0	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	72		70 - 130								
o-Terphenyl	66	S1-	70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36006/1-A

Matrix: Solid

Analysis Batch: 36264

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			10/06/22 11:38	1

Lab Sample ID: LCS 880-36006/2-A

Matrix: Solid

Analysis Batch: 36264

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	241.3		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-36006/3-A

Matrix: Solid

Analysis Batch: 36264

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	258.0		mg/Kg		103	90 - 110	7	20

Lab Sample ID: 890-3112-3 MS

Matrix: Solid

Analysis Batch: 36264

Client Sample ID: PH06

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	92.4		251	350.1		mg/Kg		103	90 - 110

Lab Sample ID: 890-3112-3 MSD

Matrix: Solid

Analysis Batch: 36264

Client Sample ID: PH06

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	92.4		251	334.5		mg/Kg		97	90 - 110	5	20

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

GC VOA

Prep Batch: 36293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-36293/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 36442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Total/NA	Solid	8021B	36449
890-3112-2	PH05A	Total/NA	Solid	8021B	36449
890-3112-3	PH06	Total/NA	Solid	8021B	36449
890-3112-4	PH06A	Total/NA	Solid	8021B	36449
890-3112-5	PH07	Total/NA	Solid	8021B	36449
890-3112-6	PH07A	Total/NA	Solid	8021B	36449
MB 880-36293/5-A	Method Blank	Total/NA	Solid	8021B	36293
MB 880-36449/5-A	Method Blank	Total/NA	Solid	8021B	36449
LCS 880-36449/1-A	Lab Control Sample	Total/NA	Solid	8021B	36449
LCSD 880-36449/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36449
890-3089-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	36449
890-3089-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	36449

Prep Batch: 36449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Total/NA	Solid	5035	
890-3112-2	PH05A	Total/NA	Solid	5035	
890-3112-3	PH06	Total/NA	Solid	5035	
890-3112-4	PH06A	Total/NA	Solid	5035	
890-3112-5	PH07	Total/NA	Solid	5035	
890-3112-6	PH07A	Total/NA	Solid	5035	
MB 880-36449/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36449/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36449/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3089-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-3089-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 36561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Total/NA	Solid	Total BTEX	
890-3112-2	PH05A	Total/NA	Solid	Total BTEX	
890-3112-3	PH06	Total/NA	Solid	Total BTEX	
890-3112-4	PH06A	Total/NA	Solid	Total BTEX	
890-3112-5	PH07	Total/NA	Solid	Total BTEX	
890-3112-6	PH07A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 35895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Total/NA	Solid	8015B NM	35915
890-3112-2	PH05A	Total/NA	Solid	8015B NM	35915
890-3112-3	PH06	Total/NA	Solid	8015B NM	35915
890-3112-4	PH06A	Total/NA	Solid	8015B NM	35915
890-3112-5	PH07	Total/NA	Solid	8015B NM	35915
890-3112-6	PH07A	Total/NA	Solid	8015B NM	35915
MB 880-35915/1-A	Method Blank	Total/NA	Solid	8015B NM	35915

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

GC Semi VOA (Continued)

Analysis Batch: 35895 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-35915/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	35915
LCSD 880-35915/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	35915
890-3112-1 MS	PH05	Total/NA	Solid	8015B NM	35915
890-3112-1 MSD	PH05	Total/NA	Solid	8015B NM	35915

Prep Batch: 35915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Total/NA	Solid	8015NM Prep	
890-3112-2	PH05A	Total/NA	Solid	8015NM Prep	
890-3112-3	PH06	Total/NA	Solid	8015NM Prep	
890-3112-4	PH06A	Total/NA	Solid	8015NM Prep	
890-3112-5	PH07	Total/NA	Solid	8015NM Prep	
890-3112-6	PH07A	Total/NA	Solid	8015NM Prep	
MB 880-35915/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-35915/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-35915/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3112-1 MS	PH05	Total/NA	Solid	8015NM Prep	
890-3112-1 MSD	PH05	Total/NA	Solid	8015NM Prep	

Analysis Batch: 36039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Total/NA	Solid	8015 NM	
890-3112-2	PH05A	Total/NA	Solid	8015 NM	
890-3112-3	PH06	Total/NA	Solid	8015 NM	
890-3112-4	PH06A	Total/NA	Solid	8015 NM	
890-3112-5	PH07	Total/NA	Solid	8015 NM	
890-3112-6	PH07A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 36006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Soluble	Solid	DI Leach	
890-3112-2	PH05A	Soluble	Solid	DI Leach	
890-3112-3	PH06	Soluble	Solid	DI Leach	
890-3112-4	PH06A	Soluble	Solid	DI Leach	
890-3112-5	PH07	Soluble	Solid	DI Leach	
890-3112-6	PH07A	Soluble	Solid	DI Leach	
MB 880-36006/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36006/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36006/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3112-3 MS	PH06	Soluble	Solid	DI Leach	
890-3112-3 MSD	PH06	Soluble	Solid	DI Leach	

Analysis Batch: 36264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-1	PH05	Soluble	Solid	300.0	36006
890-3112-2	PH05A	Soluble	Solid	300.0	36006
890-3112-3	PH06	Soluble	Solid	300.0	36006
890-3112-4	PH06A	Soluble	Solid	300.0	36006
890-3112-5	PH07	Soluble	Solid	300.0	36006

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QC Association Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

HPLC/IC (Continued)

Analysis Batch: 36264 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3112-6	PH07A	Soluble	Solid	300.0	36006
MB 880-36006/1-A	Method Blank	Soluble	Solid	300.0	36006
LCS 880-36006/2-A	Lab Control Sample	Soluble	Solid	300.0	36006
LCSD 880-36006/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36006
890-3112-3 MS	PH06	Soluble	Solid	300.0	36006
890-3112-3 MSD	PH06	Soluble	Solid	300.0	36006

Lab Chronicle

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Client Sample ID: PH05

Lab Sample ID: 890-3112-1

Date Collected: 09/29/22 08:50

Matrix: Solid

Date Received: 09/29/22 13:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	36449	10/08/22 12:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36442	10/09/22 08:33	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36561	10/10/22 10:40	AJ	EET MID
Total/NA	Analysis	8015 NM		1			36039	10/04/22 09:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35915	10/03/22 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35895	10/03/22 11:03	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 13:06	CH	EET MID

Client Sample ID: PH05A

Lab Sample ID: 890-3112-2

Date Collected: 09/29/22 08:55

Matrix: Solid

Date Received: 09/29/22 13:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36449	10/08/22 12:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36442	10/09/22 08:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36561	10/10/22 10:40	AJ	EET MID
Total/NA	Analysis	8015 NM		1			36039	10/04/22 09:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	35915	10/03/22 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35895	10/03/22 12:05	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 13:12	CH	EET MID

Client Sample ID: PH06

Lab Sample ID: 890-3112-3

Date Collected: 09/29/22 09:00

Matrix: Solid

Date Received: 09/29/22 13:19

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	36449	10/08/22 12:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36442	10/09/22 09:14	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36561	10/10/22 10:40	AJ	EET MID
Total/NA	Analysis	8015 NM		1			36039	10/04/22 09:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	35915	10/03/22 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35895	10/03/22 12:25	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 13:17	CH	EET MID

Client Sample ID: PH06A

Lab Sample ID: 890-3112-4

Date Collected: 09/29/22 09:05

Matrix: Solid

Date Received: 09/29/22 13:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	36449	10/08/22 12:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36442	10/09/22 09:35	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36561	10/10/22 10:40	AJ	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Client Sample ID: PH06A

Lab Sample ID: 890-3112-4

Date Collected: 09/29/22 09:05

Matrix: Solid

Date Received: 09/29/22 13:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			36039	10/04/22 09:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	35915	10/03/22 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35895	10/03/22 12:46	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 13:35	CH	EET MID

Client Sample ID: PH07

Lab Sample ID: 890-3112-5

Date Collected: 09/29/22 09:15

Matrix: Solid

Date Received: 09/29/22 13:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	36449	10/08/22 12:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36442	10/09/22 09:55	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36561	10/10/22 10:40	AJ	EET MID
Total/NA	Analysis	8015 NM		1			36039	10/04/22 09:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	35915	10/03/22 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35895	10/03/22 13:06	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 13:41	CH	EET MID

Client Sample ID: PH07A

Lab Sample ID: 890-3112-6

Date Collected: 09/29/22 09:20

Matrix: Solid

Date Received: 09/29/22 13:19

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	36449	10/08/22 12:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	36442	10/09/22 10:16	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			36561	10/10/22 10:40	AJ	EET MID
Total/NA	Analysis	8015 NM		1			36039	10/04/22 09:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	35915	10/03/22 08:31	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	35895	10/03/22 13:27	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	36006	10/03/22 14:32	KS	EET MID
Soluble	Analysis	300.0		1			36264	10/06/22 13:58	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

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

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

Method Summary

Client: Ensolum
Project/Site: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

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: EMSU Satellite Battery #10

Job ID: 890-3112-1
SDG: 03C2077001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3112-1	PH05	Solid	09/29/22 08:50	09/29/22 13:19	2'
890-3112-2	PH05A	Solid	09/29/22 08:55	09/29/22 13:19	4'
890-3112-3	PH06	Solid	09/29/22 09:00	09/29/22 13:19	1'
890-3112-4	PH06A	Solid	09/29/22 09:05	09/29/22 13:19	2'
890-3112-5	PH07	Solid	09/29/22 09:15	09/29/22 13:19	2'
890-3112-6	PH07A	Solid	09/29/22 09:20	09/29/22 13:19	4'



Environment Testing
Xenoco

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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Page _____ of _____

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Tacoma Morrissey
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	303-887-2946	Email:	mmorrissey@ensolum.com

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

Project Name:	EMSU Satellite Battery #10	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code	
Project Number:	03C2077001	Due Date:			
Project Location:	32.481208, -103.273891	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Kase Parker				
PO #:					
SAMPLE RECEIPT	Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Well Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID:	IM-007		
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	-0.2		
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading:	14.2		
Total Containers:		Corrected Temperature:	14.0		



890-3112 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grav/Comp	# of Cont	ANALYSIS REQUEST	Preservative Codes	Sample Comments
PH05	S	9/29/2022	8:50	2'			CHLORIDES (EPA: 300.0)	DI Water: H ₂ O	Incident ID: NAPP2223850551
PH05A	S	9/29/2022	8:55	4'			TPH (8015)	Cool: Cool MeOH: Me	Cost Center:
PH06	S	9/29/2022	9:00	1'			BTEX (8021)	HCL: HC HNO ₃ : HN	
PH06A	S	9/29/2022	9:05	2'				H ₂ SO ₄ : H ₂ NaOH: Na	
PH07	S	9/29/2022	9:15	2'				H ₃ PO ₄ : HP	
PH07A	S	9/29/2022	9:20	4'				NaHSO ₄ : NABIS	
								Na ₂ S ₂ O ₃ : NaSO ₃	
								Zn Acetate+NaOH: Zn	
								NaOH+Ascorbic Acid: SASC	

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenoco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenoco. A minimum charge of \$650 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenoco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	9/29/2022 13:49			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3112-1

SDG Number: 03C2077001

Login Number: 3112

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: 890-3112-1

SDG Number: 03C2077001

Login Number: 3112

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 10/03/22 01:12 PM

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 153877

CONDITIONS

Operator: Empire New Mexico LLC 2200 S. Utica Place Tulsa, OK 74114	OGRID: 330679
	Action Number: 153877
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan Approved with Conditions. Variance to collect confirmation soil samples not to exceed 500ft2 approved. As the release was 110 bbls of crude oil with 0 bbls recovery, please analyze all soil samples for BTEX and TPH as directed in Table 1 of 19.15.29 NMAC. Assessment soil samples on pad should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release, regardless of depth to groundwater.	11/22/2022