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	NMAP1826970471
District RP	2RP-4984
Facility ID	N/A
Application ID	pMAP1826970173

Release Notification

Responsible Party

Responsible Party: **WPX Energy/ RKI**	OGRID: **246289**
Contact Name: **Jim Raley**	Contact Telephone: **575-689-7597**
Contact email: **james.raley@wpxenergy.com**	Incident # *(assigned by OCD)* NMAP1826970471
Contact mailing address: **5315 Buena Vista Dr., Carlsbad, NM 88220**	

Location of Release Source

Latitude: **32.0069847** Longitude: **-103.9574661**
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: **EP USA #005**	Site Type: **Oil**
Date Release Discovered: **9/17/2018**	API#: **30-015-25020**

Unit Letter	Section	Township	Range	County
N	**26**	**26S**	**29E**	**Eddy**

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) **3**	Volume Recovered (bbls) **0**
☒ Produced Water	Volume Released (bbls) **5**	Volume Recovered (bbls) **0**
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Interior corrosion on 1" nipple located on wellhead allowed small hole to develop. This allowed fluids to escape to pad surface. Small area off pad was also impacted approx 50' on east side of well pad. BLM permission granted to excavate impacted area off-site.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NMAP1826970471
District RP	2RP-4984
Facility ID	N/A
Application ID	pMAP1826970173

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

Initial Response

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

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

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

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

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

Printed Name: **Jim Raley**

Title: **Environmental Specialist**

Signature: Jim Raley

Date: **9/25/2018**

email: james.raley@wpxenergy.com

Telephone: **575-689-7597**

OCD Only

Received by: _____

Date: 09/26/18

Incident ID:	NMAP1826970471
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID:	NMAP1826970471
District RP	
Facility ID	
Application ID	

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

Printed Name: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 3/14/2023

email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: Jocelyn Harimon Date: 03/14/2023

State of New Mexico
Oil Conservation Division

Incident ID:	NMAP1826970471
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 3/14/2023

email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: Jocelyn Harimon Date: 03/14/2023

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

Closure Approved by: Jennifer Nobui Date: 03/21/2023

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ENSOLUM

CLOSURE REQUEST REPORT

Site Location:

EP USA #005
Eddy County, New Mexico
Incident Number
NMAP1826970471

March 14, 2023
Ensolum Project No. 03A1987013

Prepared for:

WPX Energy Permian, LLC
5315 Buena Vista Dr.
Carlsbad, NM 88220
Attention: Jim Raley

Prepared by:

Erick Herrera
Staff Geologist

Ashley L Ager, M.S., P.G.
Principal

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LIST OF APPENDICES

1.0 INTRODUCTION

Ensolum, LLC (Ensolum) has prepared this Closure Request Report (CRR) to document remedial actions performed by WPX Energy Permian, LLC (WPX) at the EP USA #005 (hereinafter referred to as the "Site") in Unit N, Section 26, Township 26 South, Range 29 East, in Eddy County, New Mexico. Additional remediation was conducted as outlined in the Remediation Work Plan Addendum (RWPA), which was approved by the New Mexico Oil Conservation Division (NMOCD) on September 19, 2022. Based on the completed remedial actions and results of subsequent soil sampling events to address the release of crude oil and produced water at the Site, WPX respectfully requests No Further Action (NFA) for Incident Number NMAP1826970471. All previous remediation activities and soil sample analytical results can be referenced in the original RWPA and other submitted deliverable documents to the NMOCD.

1.1 Site Description & Release Background

The Site is located within Eddy County, New Mexico (32.0069847°N, 103.9574661° W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land **(Figure 1** in **Appendix A)**.

On September 17, 2018, interior corrosion on a 1-inch nipple located on a wellhead allowed a small hole to develop and release approximately 3 barrels (bbls) of crude oil and 5 bbls of produced water to the well pad and adjacent pasture. No free-standing fluids were recovered. WPX reported the release to the NMOCD with a Corrective Action Form C-141 (Form C-141) on September 25, 2018 and was subsequently assigned Incident Number NMAP1826970471.

1.2 Site Characterization

The RWPA assigned the site characterization according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Based on the review of nearby Site receptors and depth to groundwater determination at the Site, the following Closure Criteria for constituents of concern (COCs) were applied:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX): 50 mg/kg
- Total Petroleum Hydrocarbon (TPH): 100 mg/kg
- Chloride: 600 mg/kg

2.0 REMEDIATION ACTIONS

2.1 Excavation Activities

From January 16 to January 30, 2023, Ensolum oversaw excavation activities to remove remaining impacted soil associated with the subject release in the top four feet via mechanical heavy equipment. Excavation activites were directed by field sceening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Photographic documentation was conducted during excavation activities and is included in **Appendix B**.

Following removal of impacted soil, Ensolum collected 5-point composite excavation confirmation soil samples at the approved frequency of 500 square feet from the sidewalls of the excavation. The composite soil samples were collected by placing five equivalent aliquots of soil into a

1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples SW04 through SW07 were collected from the sidewalls of the excavation at depths ranging from the ground surface to approximately 4 feet bgs. All previous and current confirmation soil sample locations and the final excavation extent are depicted on **Figure 2** in **Appendix A**.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported and chilled under strict chain-of-custody procedures, to Eurofins LLC (Eurofins) in Carlsbad, New Mexico, for analysis of: BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0.

On February 3, 2023, a 20-mil impermeable liner was placed into the excavation floor at approximately 4 feet bgs. Immediately following the liner installation, the excavation was backfilled with clean, non-waste containing soil and restored to “as close to its original state” as possible. Photographic documentation of the liner installation is included in **Appendix B**. The approximate liner extent is provided on **Figure 2** in **Appendix A**.

2.2 Waste Handling

An additional 986 cubic yards of impacted soil were excavated under WPX-approved manifests from continued remedial actions. The excavated impacted soil was transported to a R360 Environmental Solutions facility in Orla, Texas in accordance with state and federal regulations.

3.0 SOIL SAMPLING RESULTS

All final confirmation soil sample laboratory analytical results indicated concentrations of COCs were below the Closure Criteria. Laboratory analytical results are summarized on **Table 1** in **Appendix C**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix D**. **Appendix E** provides extension and sampling correspondence email notification receipts associated with the release.

4.0 FINDINGS AND CONCLUSIONS

The primary objectives of Ensolum’s scope of services were to document response actions performed at the Site were completed in accordance with the approved RWPA and applicable NMOCD regulatory guidelines. Based on the results documented in this report, the following findings and conclusions regarding the Site are presented:

- An additional 986 cubic yards of impacted soil were excavated under WPX-approved manifests from continued remedial actions and removed from the Site for disposal in accordance with state and federal regulations;
- All final confirmation soil sample laboratory analytical results indicated concentrations of COCs were below the Closure Criteria;
- Based on current laboratory data and delineation soil sample depths, it is estimated that the release area contains 1,698 cubic yards of residual chloride impacts greater than the applicable Closure Criteria below the top four feet; and
- A 20-mil impermeable liner was installed at a depth approximately 4 feet bgs on the floor of the final excavation extent in order to act as a physical barrier and mitigate further

migration of residual chloride impacts into the subsurface. The excavation was backfilled with clean, imported soil and restored to “as close to its original state” as possible.

Based on the conclusions presented, WPX believes the activities described above have met the requirements set forth in NMAC 19.15.29.13 to be protective of human health, the environment, and groundwater. As such, WPX respectfully requests approval of this CRR from NMOCD.

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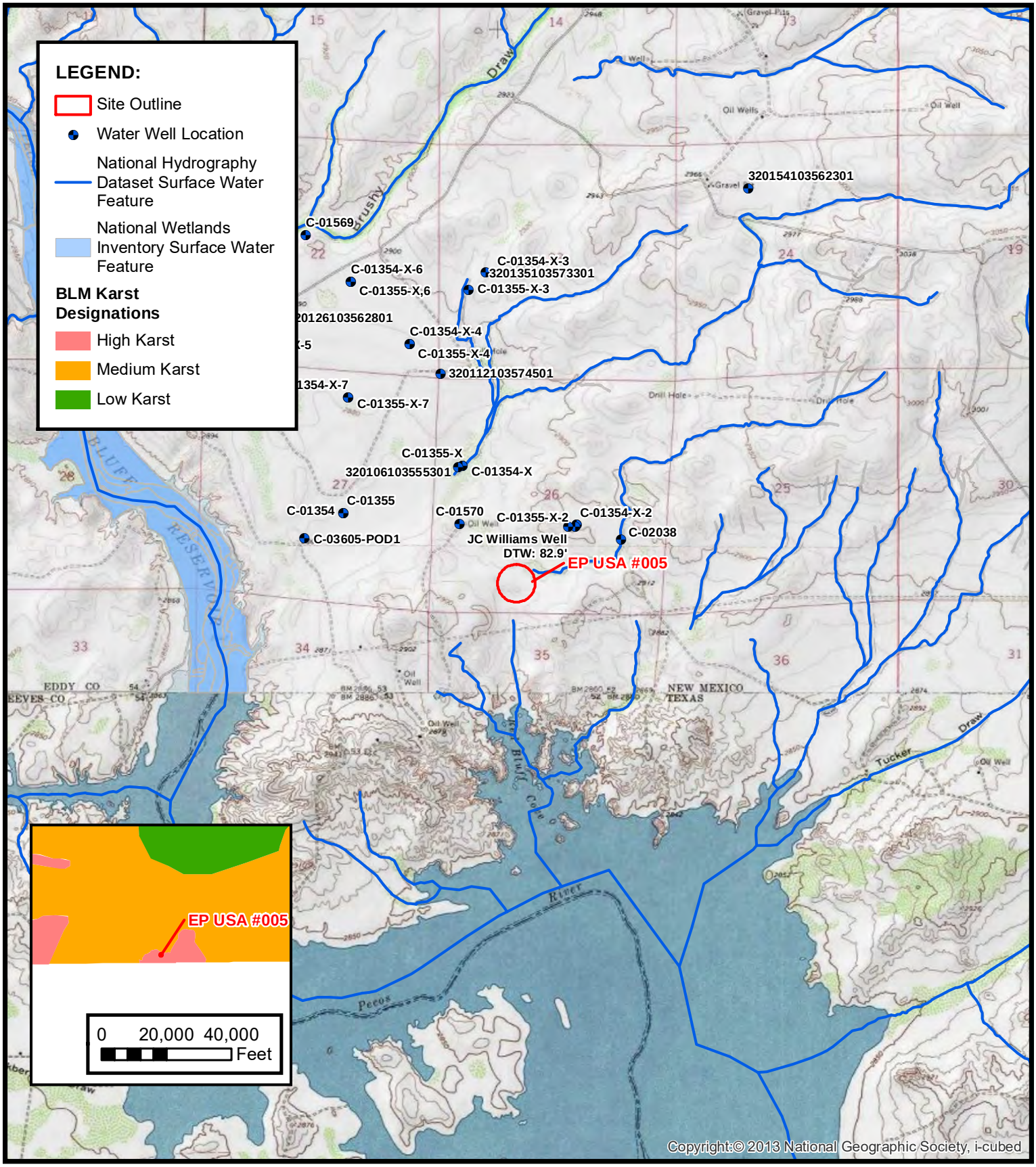
APPENDIX A

Figures

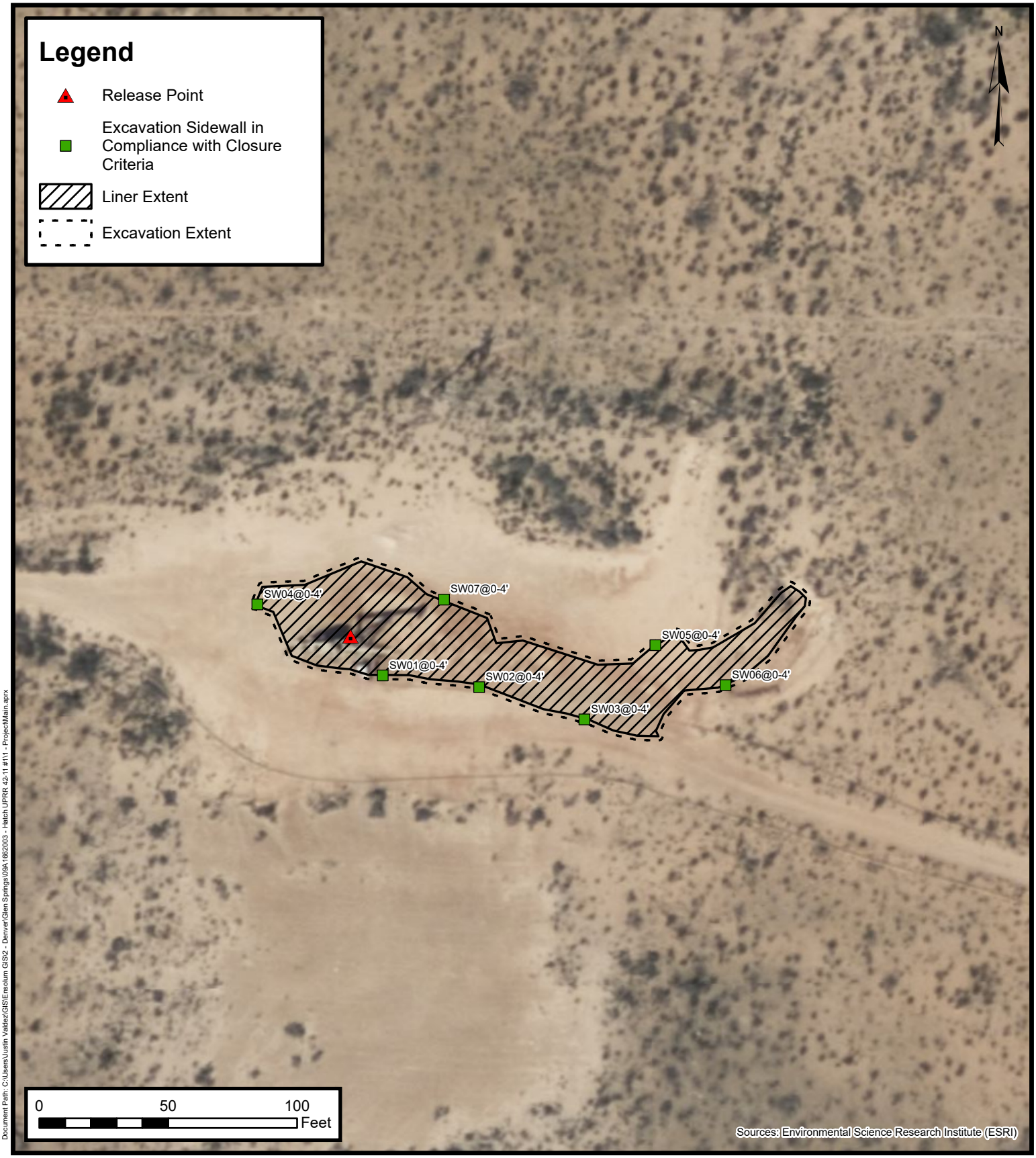


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE MAP

EP USA #005
WPX Energy Permian, LLC
Unit N, Section 26, Township 26S, Range 29E
Eddy County, New Mexico

FIGURE
1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\2 - Denver\Glen Springs\09A1662003 - Hatch UPRR 42-11 #1\11 - Project\Main.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

EP USA #005
WPX Energy Permian, LLC
Unit N, Section 26, Township 26S, Range 29E
Eddy County, New Mexico

FIGURE
2

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
WPX Energy Permian, LLC
EP USA #005
Incident Number: NMAP1826970471

Photograph 1 Date: 01/16/2023
Description: Excavation activities.
View: Northeast

Photograph 2 Date: 01/17/2023
Description: Excavation activities.
View: Northeast

Photograph 3 Date: 02/03/2023
Description: Liner installation activities.
View: Northeast

Photograph 4 Date: 03/01/2023
Description: Backfilled excavation with liner.
View: Northeast

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APPENDIX C

Tables

ENSOLUM

TABLE I
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC - EP USA #005
Eddy County, New Mexico

Ensolum Project No. 03A1987013

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)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**100**	**600**
Excavation Soil Sample Analytical Results									
SW01	06/17/2022	0 - 4	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	333
SW02	06/17/2022	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	403
SW03	06/17/2022	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	372
SW04	01/17/2023	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	391
SW05	01/17/2023	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	93.9
SW06	01/30/2023	0 - 4	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	236
SW07	01/17/2023	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	347

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain-of-Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2438-1
Laboratory Sample Delivery Group: 03A1987013
Client Project/Site: EP USA #005

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

Attn: Joseph Hernandez

JKramer

Authorized for release by:
6/22/2022 5:03:40 PM

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

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

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

Client: Ensolum
Project/Site: EP USA #005

Laboratory Job ID: 890-2438-1
SDG: 03A1987013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Job ID: 890-2438-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2438-1

Receipt
The samples were received on 6/21/2022 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

GC VOA
Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-28110 and analytical batch 880-28092 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-16140-A-1-C). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-28082 and analytical batch 880-28134 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Client Sample ID: SW01
Date Collected: 06/17/22 13:00
Date Received: 06/21/22 09:06
Sample Depth: 0' - 4'

Lab Sample ID: 890-2438-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:57	06/22/22 12:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:57	06/22/22 12:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:57	06/22/22 12:07	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/22/22 09:57	06/22/22 12:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/22/22 09:57	06/22/22 12:07	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/22/22 09:57	06/22/22 12:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*06/22/22 09:57*	*06/22/22 12:07*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*06/22/22 09:57*	*06/22/22 12:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			06/22/22 14:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			06/22/22 17:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		06/22/22 09:41	06/22/22 13:47	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/22/22 09:41	06/22/22 13:47	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/22/22 09:41	06/22/22 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*06/22/22 09:41*	*06/22/22 13:47*	*1*
o-Terphenyl	*124*		*70 - 130*	*06/22/22 09:41*	*06/22/22 13:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**333**	**F1**	5.04		mg/Kg			06/22/22 15:26	1

Client Sample ID: SW02
Date Collected: 06/17/22 13:45
Date Received: 06/21/22 09:06
Sample Depth: 0' - 4'

Lab Sample ID: 890-2438-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/22/22 09:57	06/22/22 12:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/22/22 09:57	06/22/22 12:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*06/22/22 09:57*	*06/22/22 12:27*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Client Sample ID: SW02
Date Collected: 06/17/22 13:45
Date Received: 06/21/22 09:06
Sample Depth: 0' - 4'

Lab Sample ID: 890-2438-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*06/22/22 09:57*	*06/22/22 12:27*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/22/22 14:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			06/22/22 17:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/22/22 09:41	06/22/22 14:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/22/22 09:41	06/22/22 14:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/22/22 09:41	06/22/22 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*06/22/22 09:41*	*06/22/22 14:09*	*1*
o-Terphenyl	*119*		*70 - 130*	*06/22/22 09:41*	*06/22/22 14:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**403**		5.02		mg/Kg			06/22/22 15:49	1

Client Sample ID: SW03
Date Collected: 06/17/22 14:30
Date Received: 06/21/22 09:06
Sample Depth: 0' - 4'

Lab Sample ID: 890-2438-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:48	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:48	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/22/22 09:57	06/22/22 12:48	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 12:48	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/22/22 09:57	06/22/22 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*06/22/22 09:57*	*06/22/22 12:48*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*06/22/22 09:57*	*06/22/22 12:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/22/22 14:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			06/22/22 17:01	1

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Client Sample Results

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Client Sample ID: SW03
Date Collected: 06/17/22 14:30
Date Received: 06/21/22 09:06
Sample Depth: 0' - 4'

Lab Sample ID: 890-2438-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/22/22 09:41	06/22/22 14:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/22/22 09:41	06/22/22 14:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/22/22 09:41	06/22/22 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*06/22/22 09:41*	*06/22/22 14:30*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/22/22 09:41*	*06/22/22 14:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**372**		5.05		mg/Kg			06/22/22 15:57	1

Surrogate Summary

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-16162-A-1-B MS	Matrix Spike	111	97
880-16162-A-1-C MSD	Matrix Spike Duplicate	111	99
890-2438-1	SW01	112	92
890-2438-2	SW02	115	86
890-2438-3	SW03	112	89
LCS 880-28110/1-A	Lab Control Sample	110	98
LCSD 880-28110/2-A	Lab Control Sample Dup	108	98
MB 880-28110/5-A	Method Blank	102	90

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-16140-A-1-D MS	Matrix Spike	100	99
880-16140-A-1-E MSD	Matrix Spike Duplicate	99	107
890-2438-1	SW01	113	124
890-2438-2	SW02	107	119
890-2438-3	SW03	104	111
LCS 880-28102/2-A	Lab Control Sample	104	115
LCSD 880-28102/3-A	Lab Control Sample Dup	97	109
MB 880-28102/1-A	Method Blank	104	121

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-28110/5-A
Matrix: Solid
Analysis Batch: 28092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 11:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 11:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 11:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/22/22 09:57	06/22/22 11:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/22/22 09:57	06/22/22 11:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/22/22 09:57	06/22/22 11:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/22/22 09:57*	*06/22/22 11:24*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*06/22/22 09:57*	*06/22/22 11:24*	*1*

Lab Sample ID: LCS 880-28110/1-A
Matrix: Solid
Analysis Batch: 28092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28110

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1010		mg/Kg		101	70 - 130
Toluene	0.100	0.09961		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.1046		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.2149		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1082		mg/Kg		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-28110/2-A
Matrix: Solid
Analysis Batch: 28092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28110

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09688		mg/Kg		97	70 - 130	4	35
Toluene	0.100	0.09543		mg/Kg		95	70 - 130	4	35
Ethylbenzene	0.100	0.09857		mg/Kg		99	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2034		mg/Kg		102	70 - 130	6	35
o-Xylene	0.100	0.1027		mg/Kg		103	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-16162-A-1-B MS
Matrix: Solid
Analysis Batch: 28092

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28110

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.100	0.06858	F1	mg/Kg		68	70 - 130
Toluene	<0.00199	U F1	0.100	0.06739	F1	mg/Kg		67	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

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

Lab Sample ID: 880-16162-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28092 — **Prep Batch: 28110**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.100	0.06844	F1	mg/Kg		68	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1409		mg/Kg		70	70 - 130
o-Xylene	<0.00199	U	0.100	0.07154		mg/Kg		71	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-16162-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28092 — **Prep Batch: 28110**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	0.08709		mg/Kg		87	70 - 130	24	35
Toluene	<0.00199	U F1	0.100	0.08310		mg/Kg		83	70 - 130	21	35
Ethylbenzene	<0.00199	U F1	0.100	0.08633		mg/Kg		86	70 - 130	23	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1769		mg/Kg		88	70 - 130	23	35
o-Xylene	<0.00199	U	0.100	0.08870		mg/Kg		89	70 - 130	21	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-28102/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28084 — **Prep Batch: 28102**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/22/22 09:41	06/22/22 10:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/22/22 09:41	06/22/22 10:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/22/22 09:41	06/22/22 10:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*06/22/22 09:41*	*06/22/22 10:54*	*1*
o-Terphenyl	*121*		*70 - 130*	*06/22/22 09:41*	*06/22/22 10:54*	*1*

Lab Sample ID: LCS 880-28102/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 28084 — **Prep Batch: 28102**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	855.5		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1033		mg/Kg		103	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

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

Lab Sample ID: LCS 880-28102/2-A
Matrix: Solid
Analysis Batch: 28084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28102

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	115		70 - 130

Lab Sample ID: LCSD 880-28102/3-A
Matrix: Solid
Analysis Batch: 28084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28102

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	817.2		mg/Kg		82	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	953.5		mg/Kg		95	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: 880-16140-A-1-D MS
Matrix: Solid
Analysis Batch: 28084

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28102

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	998	1070		mg/Kg		105	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	969.2		mg/Kg		95	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	99		70 - 130

Lab Sample ID: 880-16140-A-1-E MSD
Matrix: Solid
Analysis Batch: 28084

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 28102

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	1035		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	982.5		mg/Kg		96	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	107		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-28082/1-A
Matrix: Solid
Analysis Batch: 28134

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/22/22 15:02	1

Lab Sample ID: LCS 880-28082/2-A
Matrix: Solid
Analysis Batch: 28134

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-28082/3-A
Matrix: Solid
Analysis Batch: 28134

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	255.6		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-2438-1 MS
Matrix: Solid
Analysis Batch: 28134

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	333	F1	252	491.8	F1	mg/Kg		63	90 - 110		

Lab Sample ID: 890-2438-1 MSD
Matrix: Solid
Analysis Batch: 28134

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	333	F1	252	494.4	F1	mg/Kg		64	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

GC VOA

Analysis Batch: 28092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Total/NA	Solid	8021B	28110
890-2438-2	SW02	Total/NA	Solid	8021B	28110
890-2438-3	SW03	Total/NA	Solid	8021B	28110
MB 880-28110/5-A	Method Blank	Total/NA	Solid	8021B	28110
LCS 880-28110/1-A	Lab Control Sample	Total/NA	Solid	8021B	28110
LCSD 880-28110/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	28110
880-16162-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	28110
880-16162-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	28110

Prep Batch: 28110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Total/NA	Solid	5035	
890-2438-2	SW02	Total/NA	Solid	5035	
890-2438-3	SW03	Total/NA	Solid	5035	
MB 880-28110/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-28110/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-28110/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-16162-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-16162-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 28158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Total/NA	Solid	Total BTEX	
890-2438-2	SW02	Total/NA	Solid	Total BTEX	
890-2438-3	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 28084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Total/NA	Solid	8015B NM	28102
890-2438-2	SW02	Total/NA	Solid	8015B NM	28102
890-2438-3	SW03	Total/NA	Solid	8015B NM	28102
MB 880-28102/1-A	Method Blank	Total/NA	Solid	8015B NM	28102
LCS 880-28102/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	28102
LCSD 880-28102/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	28102
880-16140-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	28102
880-16140-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	28102

Prep Batch: 28102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Total/NA	Solid	8015NM Prep	
890-2438-2	SW02	Total/NA	Solid	8015NM Prep	
890-2438-3	SW03	Total/NA	Solid	8015NM Prep	
MB 880-28102/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-28102/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-28102/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-16140-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-16140-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

GC Semi VOA

Analysis Batch: 28177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Total/NA	Solid	8015 NM	
890-2438-2	SW02	Total/NA	Solid	8015 NM	
890-2438-3	SW03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 28082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Soluble	Solid	DI Leach	
890-2438-2	SW02	Soluble	Solid	DI Leach	
890-2438-3	SW03	Soluble	Solid	DI Leach	
MB 880-28082/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-28082/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-28082/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2438-1 MS	SW01	Soluble	Solid	DI Leach	
890-2438-1 MSD	SW01	Soluble	Solid	DI Leach	

Analysis Batch: 28134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2438-1	SW01	Soluble	Solid	300.0	28082
890-2438-2	SW02	Soluble	Solid	300.0	28082
890-2438-3	SW03	Soluble	Solid	300.0	28082
MB 880-28082/1-A	Method Blank	Soluble	Solid	300.0	28082
LCS 880-28082/2-A	Lab Control Sample	Soluble	Solid	300.0	28082
LCSD 880-28082/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	28082
890-2438-1 MS	SW01	Soluble	Solid	300.0	28082
890-2438-1 MSD	SW01	Soluble	Solid	300.0	28082

Lab Chronicle

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Client Sample ID: SW01
Date Collected: 06/17/22 13:00
Date Received: 06/21/22 09:06

Lab Sample ID: 890-2438-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	28110	06/22/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28092	06/22/22 12:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28158	06/22/22 14:29	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28177	06/22/22 17:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	28102	06/22/22 09:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			28084	06/22/22 13:47	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	28082	06/21/22 19:10	SC	XEN MID
Soluble	Analysis	300.0		1			28134	06/22/22 15:26	CH	XEN MID

Client Sample ID: SW02
Date Collected: 06/17/22 13:45
Date Received: 06/21/22 09:06

Lab Sample ID: 890-2438-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	28110	06/22/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28092	06/22/22 12:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28158	06/22/22 14:29	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28177	06/22/22 17:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	28102	06/22/22 09:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			28084	06/22/22 14:09	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	28082	06/21/22 19:10	SC	XEN MID
Soluble	Analysis	300.0		1			28134	06/22/22 15:49	CH	XEN MID

Client Sample ID: SW03
Date Collected: 06/17/22 14:30
Date Received: 06/21/22 09:06

Lab Sample ID: 890-2438-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	28110	06/22/22 09:57	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28092	06/22/22 12:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28158	06/22/22 14:29	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28177	06/22/22 17:01	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	28102	06/22/22 09:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			28084	06/22/22 14:30	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	28082	06/21/22 19:10	SC	XEN MID
Soluble	Analysis	300.0		1			28134	06/22/22 15:57	CH	XEN MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

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

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

Method Summary

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: EP USA #005

Job ID: 890-2438-1
SDG: 03A1987013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2438-1	SW01	Solid	06/17/22 13:00	06/21/22 09:06	0' - 4'
890-2438-2	SW02	Solid	06/17/22 13:45	06/21/22 09:06	0' - 4'
890-2438-3	SW03	Solid	06/17/22 14:30	06/21/22 09:06	0' - 4'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jhernandez@Ensolum.com, jim.raley@dvn.com

Work Order Comments

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

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	EP USA #005	Turn Around	☐ Routine ☑ Rush
Project Number:	03A1987013	Due Date:	24 HR
Project Location:	Rural Eddy, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Gilbert Moreno		
CC #:	1061232001		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TAM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.8	
Total Containers:		Corrected Temperature:	5.6	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW01	S	6.17.22	13:00	0-4'	Comp	1		X	X	X
SW02	S	6.17.22	13:45	0-4'	Comp	1		X	X	X
SW03	S	6.17.22	14:30	0-4'	Comp	1		X	X	X

Preservative Codes

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

Sample Comments

Incident ID
NMAP1826970471

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6/21/22 904	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2438-1
SDG Number: 03A1987013

Login Number: 2438
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: 890-2438-1
SDG Number: 03A1987013

Login Number: 2438
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/22/22 10:50 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 1/27/2023 7:52:27 AM Revision 2

JOB DESCRIPTION

EP USA 5
SDG NUMBER 03A1987013

JOB NUMBER

890-3884-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

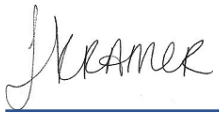
my EOL

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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1/27/2023 7:52:27 AM
Revision 2

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

Client: Ensolum
Project/Site: EP USA 5

Laboratory Job ID: 890-3884-1
SDG: 03A1987013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Job ID: 890-3884-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3884-1

REVISION

The report being provided is a revision of the original report sent on 1/23/2023. The report (revision 2) is being revised due to Per client email, requesting sample ID correction from SW01 to SW04.

Report revision history

The report being provided is a revision of the original report sent on 1/23/2023. The report (revision 2) is being revised due to Per client email, requesting sample ID correction from SW01 to SW04.
Revision 1 - 1/23/2023 - Reason - Chain of custody missing on final report.

Receipt
The sample was received on 1/19/2023 11:42 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW04 (890-3884-1).

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): SW04 (890-3884-1). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
890-3884
JAR
EP USA 5
WPX
SW04 1-17-23 0-4 8:20

COC
EP USA
WPX
SW01 1-17-23 0-4 8:20
BASED OFF THE TIME, DATE, DEPTH, INFO, THIS IS THE SAME SAMPLE
TALKED TO CLIENT YOCOLY AT 1:38 SAME SAMPLE

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3840-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44367 and analytical batch 880-44405 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.

Case Narrative

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Job ID: 890-3884-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Client Sample ID: SW04
Date Collected: 01/17/23 08:20
Date Received: 01/19/23 11:42
Sample Depth: 0 - 4

Lab Sample ID: 890-3884-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:39	01/20/23 14:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:39	01/20/23 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*01/19/23 16:39*	*01/20/23 14:15*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*01/19/23 16:39*	*01/20/23 14:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/20/23 14:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/23/23 11:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/20/23 10:42	01/20/23 12:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/20/23 10:42	01/20/23 12:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/20/23 10:42	01/20/23 12:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*01/20/23 10:42*	*01/20/23 12:18*	*1*
o-Terphenyl	*83*		*70 - 130*	*01/20/23 10:42*	*01/20/23 12:18*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**391**		25.0		mg/Kg			01/20/23 11:38	5

Surrogate Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

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)
880-23936-A-1-A MS	Matrix Spike	97	114
880-23936-A-1-B MSD	Matrix Spike Duplicate	95	114
890-3884-1	SW04	104	115
LCS 880-44393/1-A	Lab Control Sample	97	113
LCSD 880-44393/2-A	Lab Control Sample Dup	92	111
MB 880-44393/5-A	Method Blank	95	110

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)
890-3840-A-1-E MS	Matrix Spike	94	69 S1-
890-3840-A-1-F MSD	Matrix Spike Duplicate	98	73
890-3884-1	SW04	89	83
LCS 880-44144/2-A	Lab Control Sample	121	118
LCSD 880-44144/3-A	Lab Control Sample Dup	101	98
MB 880-44144/1-A	Method Blank	111	103

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44393/5-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*

Lab Sample ID: LCS 880-44393/1-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09599		mg/Kg		96	70 - 130		
Toluene			0.100	0.09139		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.08837		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1809		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.08607		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-44393/2-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09064		mg/Kg		91	70 - 130	6	35
Toluene			0.100	0.08785		mg/Kg		88	70 - 130	4	35
Ethylbenzene			0.100	0.08581		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1748		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.08350		mg/Kg		83	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-23936-A-1-A MS
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09771		mg/Kg		98	70 - 130		
Toluene	<0.00198	U	0.0998	0.09186		mg/Kg		92	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

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

Lab Sample ID: 880-23936-A-1-A MS
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0998	0.09038		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1866		mg/Kg		93	70 - 130
o-Xylene	<0.00198	U	0.0998	0.08930		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-23936-A-1-B MSD
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.09615		mg/Kg		96	70 - 130	2	35
Toluene	<0.00198	U	0.100	0.08993		mg/Kg		90	70 - 130	2	35
Ethylbenzene	<0.00198	U	0.100	0.08612		mg/Kg		86	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1753		mg/Kg		87	70 - 130	6	35
o-Xylene	<0.00198	U	0.100	0.08306		mg/Kg		83	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

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

Lab Sample ID: MB 880-44144/1-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*01/17/23 10:42*	*01/20/23 08:13*	*1*
o-Terphenyl	*103*		*70 - 130*	*01/17/23 10:42*	*01/20/23 08:13*	*1*

Lab Sample ID: LCS 880-44144/2-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	748.3		mg/Kg		75	70 - 130
Diesel Range Organics (Over C10-C28)	1000	737.5		mg/Kg		74	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

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

Lab Sample ID: LCS 880-44144/2-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	118		70 - 130

Lab Sample ID: LCSD 880-44144/3-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44144

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	704.0		mg/Kg		70	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	759.5		mg/Kg		76	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-3840-A-1-E MS
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44144

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	998	874.6		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	752.1		mg/Kg		71	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	69	S1-	70 - 130

Lab Sample ID: 890-3840-A-1-F MSD
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44144

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	997	853.1		mg/Kg		86	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	776.7		mg/Kg		73	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	73		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44367/1-A
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/20/23 00:05	1

Lab Sample ID: LCS 880-44367/2-A
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	272.8		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-44367/3-A
Matrix: Solid
Analysis Batch: 44405

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	273.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-23914-A-31-B MS
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	78.5	F1	250	363.9	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 880-23914-A-31-C MSD
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	78.5	F1	250	370.3	F1	mg/Kg		117	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

GC VOA

Prep Batch: 44393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Total/NA	Solid	5035	
MB 880-44393/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Total/NA	Solid	8021B	44393
MB 880-44393/5-A	Method Blank	Total/NA	Solid	8021B	44393
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	8021B	44393
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44393
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	44393
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44393

Analysis Batch: 44487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 44144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Total/NA	Solid	8015NM Prep	
MB 880-44144/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44144/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3840-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3840-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Total/NA	Solid	8015B NM	44144
MB 880-44144/1-A	Method Blank	Total/NA	Solid	8015B NM	44144
LCS 880-44144/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44144
LCSD 880-44144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44144
890-3840-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	44144
890-3840-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44144

Analysis Batch: 44544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Soluble	Solid	DI Leach	
MB 880-44367/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44367/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44367/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

HPLC/IC (Continued)

Leach Batch: 44367 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-23914-A-31-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-23914-A-31-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3884-1	SW04	Soluble	Solid	300.0	44367
MB 880-44367/1-A	Method Blank	Soluble	Solid	300.0	44367
LCS 880-44367/2-A	Lab Control Sample	Soluble	Solid	300.0	44367
LCSD 880-44367/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44367
880-23914-A-31-B MS	Matrix Spike	Soluble	Solid	300.0	44367
880-23914-A-31-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44367

Lab Chronicle

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Client Sample ID: SW04
Date Collected: 01/17/23 08:20
Date Received: 01/19/23 11:42

Lab Sample ID: 890-3884-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	44393	01/19/23 16:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44418	01/20/23 14:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44487	01/20/23 14:35	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44544	01/23/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44144	01/20/23 10:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44408	01/20/23 12:18	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44367	01/19/23 14:46	KS	EET MID
Soluble	Analysis	300.0		5			44405	01/20/23 11:38	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: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

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	T104704400-22-25	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: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

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: EP USA 5

Job ID: 890-3884-1
SDG: 03A1987013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3884-1	SW04	Solid	01/17/23 08:20	01/19/23 11:42	0 - 4

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jhernandez@ensolum.com, jim.raley@dvn.com

Work Order Comments

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

Project Name:	EP USA 5	Turn Around	☑ Routine ☐ Rush
Project Number:	03A1987013	Due Date:	24H TAT
Project Location:	Eddy County, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Yocoly Edyte Konan		
CC #:	1061232001		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR#007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.6	
Total Containers:		Corrected Temperature:	5.4	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW01	S	01.17.23	8:20	0 - 4'	Comp	2		X	X	X

890-3884 Chain of Custody

Preservative Codes

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

Sample Comments

Incident Numbers
NMAP1826970471

0-1-18-2023

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Edyte Konan		1.19.23 1142	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3884-1
SDG Number: 03A1987013

Login Number: 3884
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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3884-1
SDG Number: 03A1987013

Login Number: 3884
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/20/23 10:42 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 1/27/2023 7:51:37 AM Revision 1

JOB DESCRIPTION

EP USA 5
SDG NUMBER 03A1987013

JOB NUMBER

890-3886-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

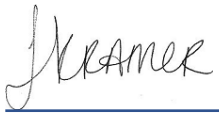
See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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1/27/2023 7:51:37 AM
Revision 1

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

Client: Ensolum
Project/Site: EP USA 5

Laboratory Job ID: 890-3886-1
SDG: 03A1987013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

Job ID: 890-3886-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3886-1

REVISION

The report being provided is a revision of the original report sent on 1/23/2023. The report (revision 1) is being revised due to Per client email, requesting sample ID correction from SW02 to SW05.

Report revision history

Receipt
The sample was received on 1/19/2023 11:42 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): SW05 (890-3886-1). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
890-3886
JAR
EP USA 5
WPX
SW05 1-17-23 0-4 8:50

COC
EP USA
WPX
SW02 1-17-23 0-4 8:50
BASED OFF THE TIME, DATE, DEPTH, INFO, THIS IS THE SAME SAMPLE
TALKED TO CLIENT YOCOLY AT 1:38 SAME SAMPLE

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3840-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44367 and analytical batch 880-44405 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: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

Client Sample ID: SW05

Date Collected: 01/17/23 08:50
Date Received: 01/19/23 11:42
Sample Depth: 0 - 4

Lab Sample ID: 890-3886-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/19/23 16:39	01/20/23 14:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/23 16:39	01/20/23 14:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/23 16:39	01/20/23 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*01/19/23 16:39*	*01/20/23 14:36*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*01/19/23 16:39*	*01/20/23 14:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/23/23 12:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/23/23 11:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/20/23 10:42	01/20/23 12:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/20/23 10:42	01/20/23 12:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/20/23 10:42	01/20/23 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*01/20/23 10:42*	*01/20/23 12:40*	*1*
o-Terphenyl	*90*		*70 - 130*	*01/20/23 10:42*	*01/20/23 12:40*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**93.9**		25.0		mg/Kg			01/20/23 11:44	5

Surrogate Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

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)
880-23936-A-1-A MS	Matrix Spike	97	114
880-23936-A-1-B MSD	Matrix Spike Duplicate	95	114
890-3886-1	SW05	104	115
LCS 880-44393/1-A	Lab Control Sample	97	113
LCSD 880-44393/2-A	Lab Control Sample Dup	92	111
MB 880-44393/5-A	Method Blank	95	110

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)
890-3840-A-1-E MS	Matrix Spike	94	69 S1-
890-3840-A-1-F MSD	Matrix Spike Duplicate	98	73
890-3886-1	SW05	103	90
LCS 880-44144/2-A	Lab Control Sample	121	118
LCSD 880-44144/3-A	Lab Control Sample Dup	101	98
MB 880-44144/1-A	Method Blank	111	103

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44393/5-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*

Lab Sample ID: LCS 880-44393/1-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09599		mg/Kg		96	70 - 130		
Toluene			0.100	0.09139		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.08837		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1809		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.08607		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-44393/2-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09064		mg/Kg		91	70 - 130	6	35
Toluene			0.100	0.08785		mg/Kg		88	70 - 130	4	35
Ethylbenzene			0.100	0.08581		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1748		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.08350		mg/Kg		83	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-23936-A-1-A MS
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09771		mg/Kg		98	70 - 130		
Toluene	<0.00198	U	0.0998	0.09186		mg/Kg		92	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

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

Lab Sample ID: 880-23936-A-1-A MS
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0998	0.09038		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1866		mg/Kg		93	70 - 130
o-Xylene	<0.00198	U	0.0998	0.08930		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-23936-A-1-B MSD
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.09615		mg/Kg		96	70 - 130	2	35
Toluene	<0.00198	U	0.100	0.08993		mg/Kg		90	70 - 130	2	35
Ethylbenzene	<0.00198	U	0.100	0.08612		mg/Kg		86	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1753		mg/Kg		87	70 - 130	6	35
o-Xylene	<0.00198	U	0.100	0.08306		mg/Kg		83	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

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

Lab Sample ID: MB 880-44144/1-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*01/17/23 10:42*	*01/20/23 08:13*	*1*
o-Terphenyl	*103*		*70 - 130*	*01/17/23 10:42*	*01/20/23 08:13*	*1*

Lab Sample ID: LCS 880-44144/2-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	748.3		mg/Kg		75	70 - 130
Diesel Range Organics (Over C10-C28)	1000	737.5		mg/Kg		74	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

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

Lab Sample ID: LCS 880-44144/2-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	118		70 - 130

Lab Sample ID: LCSD 880-44144/3-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44144

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	704.0		mg/Kg		70	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	759.5		mg/Kg		76	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-3840-A-1-E MS
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44144

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	998	874.6		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	752.1		mg/Kg		71	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	69	S1-	70 - 130

Lab Sample ID: 890-3840-A-1-F MSD
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44144

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	997	853.1		mg/Kg		86	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	776.7		mg/Kg		73	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	73		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44367/1-A
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/20/23 00:05	1

Lab Sample ID: LCS 880-44367/2-A
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	272.8		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-44367/3-A
Matrix: Solid
Analysis Batch: 44405

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	273.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-23914-A-31-B MS
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	78.5	F1	250	363.9	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 880-23914-A-31-C MSD
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	78.5	F1	250	370.3	F1	mg/Kg		117	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

GC VOA

Prep Batch: 44393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Total/NA	Solid	5035	
MB 880-44393/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Total/NA	Solid	8021B	44393
MB 880-44393/5-A	Method Blank	Total/NA	Solid	8021B	44393
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	8021B	44393
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44393
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	44393
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44393

Analysis Batch: 44556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 44144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Total/NA	Solid	8015NM Prep	
MB 880-44144/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44144/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3840-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3840-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Total/NA	Solid	8015B NM	44144
MB 880-44144/1-A	Method Blank	Total/NA	Solid	8015B NM	44144
LCS 880-44144/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44144
LCSD 880-44144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44144
890-3840-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	44144
890-3840-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44144

Analysis Batch: 44545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Soluble	Solid	DI Leach	
MB 880-44367/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44367/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44367/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

HPLC/IC (Continued)

Leach Batch: 44367 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-23914-A-31-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-23914-A-31-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3886-1	SW05	Soluble	Solid	300.0	44367
MB 880-44367/1-A	Method Blank	Soluble	Solid	300.0	44367
LCS 880-44367/2-A	Lab Control Sample	Soluble	Solid	300.0	44367
LCSD 880-44367/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44367
880-23914-A-31-B MS	Matrix Spike	Soluble	Solid	300.0	44367
880-23914-A-31-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44367

Lab Chronicle

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

Client Sample ID: SW05

Date Collected: 01/17/23 08:50
Date Received: 01/19/23 11:42

Lab Sample ID: 890-3886-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	44393	01/19/23 16:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44418	01/20/23 14:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44556	01/23/23 12:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			44545	01/23/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44144	01/20/23 10:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44408	01/20/23 12:40	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	44367	01/19/23 14:46	KS	EET MID
Soluble	Analysis	300.0		5			44405	01/20/23 11:44	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: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

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	T104704400-22-25	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: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

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: EP USA 5

Job ID: 890-3886-1
SDG: 03A1987013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3886-1	SW05	Solid	01/17/23 08:50	01/19/23 11:42	0 - 4

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jhernandez@ensolum.com, jim.raley@dvn.com

Work Order Comments

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

Project Name:	EP USA 5	Turn Around	Pres. Code
Project Number:	03A1987013	☑ Routine ☐ Rush	
Project Location:	Eddy County, NM	Due Date: 24H TAT	
Sampler's Name:	Yocoly Edyte Konan	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061232001		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TW007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.6
Total Containers:		Corrected Temperature:	5.4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SW02	S	01.17.23	8:50	0 - 4'	Comp	2	X	X	X

890-3886 Chain of Custody

Preservative Codes

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

Sample Comments

Incident Numbers
NMAP1826970471

01-18-2023

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Edyte Konan		1.19.23 1140	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3886-1
SDG Number: 03A1987013

Login Number: 3886
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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3886-1
SDG Number: 03A1987013

Login Number: 3886
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/20/23 10:42 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 1/27/2023 7:53:56 AM Revision 1

JOB DESCRIPTION

EP USA 5
SDG NUMBER 03A1987013

JOB NUMBER

890-3889-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

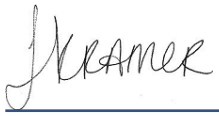
my EOL

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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1/27/2023 7:53:56 AM
Revision 1

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

Client: Ensolum
Project/Site: EP USA 5

Laboratory Job ID: 890-3889-1
SDG: 03A1987013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

Job ID: 890-3889-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3889-1

REVISION

The report being provided is a revision of the original report sent on 1/23/2023. The report (revision 1) is being revised due to Per client email, requesting sample ID correction from SW04 to SW07.

Report revision history

Receipt
The sample was received on 1/19/2023 11:42 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): SW07 (890-3889-1). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
890-3889
JAR
EP USA 5
WPX
SW07 1-17-23 0-4 9:50

COC
EP USA
WPX
SW04 1-17-23 0-4 9:50
BASED OFF THE TIME, DATE, DEPTH, INFO, THIS IS THE SAME SAMPLE
TALKED TO CLIENT YOCOLY AT 1:38 SAME SAMPLE

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3840-A-1-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-44367 and analytical batch 880-44405 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: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

Client Sample ID: SW07
Date Collected: 01/17/23 09:50
Date Received: 01/19/23 11:42
Sample Depth: 0 - 4

Lab Sample ID: 890-3889-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:39	01/20/23 15:16	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:39	01/20/23 15:16	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:39	01/20/23 15:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/19/23 16:39	01/20/23 15:16	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/19/23 16:39	01/20/23 15:16	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/19/23 16:39	01/20/23 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*01/19/23 16:39*	*01/20/23 15:16*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*01/19/23 16:39*	*01/20/23 15:16*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/23/23 12:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/23/23 11:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/20/23 10:42	01/20/23 13:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/20/23 10:42	01/20/23 13:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/20/23 10:42	01/20/23 13:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*01/20/23 10:42*	*01/20/23 13:25*	*1*
o-Terphenyl	*81*		*70 - 130*	*01/20/23 10:42*	*01/20/23 13:25*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**347**		24.9		mg/Kg			01/20/23 11:57	5

Surrogate Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

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)
880-23936-A-1-A MS	Matrix Spike	97	114
880-23936-A-1-B MSD	Matrix Spike Duplicate	95	114
890-3889-1	SW07	103	114
LCS 880-44393/1-A	Lab Control Sample	97	113
LCSD 880-44393/2-A	Lab Control Sample Dup	92	111
MB 880-44393/5-A	Method Blank	95	110

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)
890-3840-A-1-E MS	Matrix Spike	94	69 S1-
890-3840-A-1-F MSD	Matrix Spike Duplicate	98	73
890-3889-1	SW07	88	81
LCS 880-44144/2-A	Lab Control Sample	121	118
LCSD 880-44144/3-A	Lab Control Sample Dup	101	98
MB 880-44144/1-A	Method Blank	111	103

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44393/5-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/23 16:39	01/20/23 12:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/23 16:39	01/20/23 12:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*01/19/23 16:39*	*01/20/23 12:04*	*1*

Lab Sample ID: LCS 880-44393/1-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09599		mg/Kg		96	70 - 130		
Toluene			0.100	0.09139		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.08837		mg/Kg		88	70 - 130		
m-Xylene & p-Xylene			0.200	0.1809		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.08607		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-44393/2-A
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44393

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09064		mg/Kg		91	70 - 130	6	35
Toluene			0.100	0.08785		mg/Kg		88	70 - 130	4	35
Ethylbenzene			0.100	0.08581		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1748		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.08350		mg/Kg		83	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-23936-A-1-A MS
Matrix: Solid
Analysis Batch: 44418

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09771		mg/Kg		98	70 - 130		
Toluene	<0.00198	U	0.0998	0.09186		mg/Kg		92	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

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

Lab Sample ID: 880-23936-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44418 — **Prep Batch: 44393**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0998	0.09038		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1866		mg/Kg		93	70 - 130
o-Xylene	<0.00198	U	0.0998	0.08930		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 880-23936-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44418 — **Prep Batch: 44393**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.09615		mg/Kg		96	70 - 130	2	35
Toluene	<0.00198	U	0.100	0.08993		mg/Kg		90	70 - 130	2	35
Ethylbenzene	<0.00198	U	0.100	0.08612		mg/Kg		86	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1753		mg/Kg		87	70 - 130	6	35
o-Xylene	<0.00198	U	0.100	0.08306		mg/Kg		83	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

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

Lab Sample ID: MB 880-44144/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44408 — **Prep Batch: 44144**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/23 10:42	01/20/23 08:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*01/17/23 10:42*	*01/20/23 08:13*	*1*
o-Terphenyl	*103*		*70 - 130*	*01/17/23 10:42*	*01/20/23 08:13*	*1*

Lab Sample ID: LCS 880-44144/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44408 — **Prep Batch: 44144**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	748.3		mg/Kg		75	70 - 130
Diesel Range Organics (Over C10-C28)	1000	737.5		mg/Kg		74	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

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

Lab Sample ID: LCS 880-44144/2-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	118		70 - 130

Lab Sample ID: LCSD 880-44144/3-A
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44144

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	704.0		mg/Kg		70	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	759.5		mg/Kg		76	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-3840-A-1-E MS
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44144

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	998	874.6		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	752.1		mg/Kg		71	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	69	S1-	70 - 130

Lab Sample ID: 890-3840-A-1-F MSD
Matrix: Solid
Analysis Batch: 44408

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44144

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	997	853.1		mg/Kg		86	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	776.7		mg/Kg		73	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	73		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44367/1-A
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/20/23 00:05	1

Lab Sample ID: LCS 880-44367/2-A
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	272.8		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-44367/3-A
Matrix: Solid
Analysis Batch: 44405

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	273.9		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-23914-A-31-B MS
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	78.5	F1	250	363.9	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 880-23914-A-31-C MSD
Matrix: Solid
Analysis Batch: 44405

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	78.5	F1	250	370.3	F1	mg/Kg		117	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

GC VOA

Prep Batch: 44393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Total/NA	Solid	5035	
MB 880-44393/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Total/NA	Solid	8021B	44393
MB 880-44393/5-A	Method Blank	Total/NA	Solid	8021B	44393
LCS 880-44393/1-A	Lab Control Sample	Total/NA	Solid	8021B	44393
LCSD 880-44393/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44393
880-23936-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	44393
880-23936-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44393

Analysis Batch: 44558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 44144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Total/NA	Solid	8015NM Prep	
MB 880-44144/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44144/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3840-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3840-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 44408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Total/NA	Solid	8015B NM	44144
MB 880-44144/1-A	Method Blank	Total/NA	Solid	8015B NM	44144
LCS 880-44144/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44144
LCSD 880-44144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44144
890-3840-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	44144
890-3840-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44144

Analysis Batch: 44547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Soluble	Solid	DI Leach	
MB 880-44367/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44367/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44367/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

HPLC/IC (Continued)

Leach Batch: 44367 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-23914-A-31-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-23914-A-31-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3889-1	SW07	Soluble	Solid	300.0	44367
MB 880-44367/1-A	Method Blank	Soluble	Solid	300.0	44367
LCS 880-44367/2-A	Lab Control Sample	Soluble	Solid	300.0	44367
LCSD 880-44367/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44367
880-23914-A-31-B MS	Matrix Spike	Soluble	Solid	300.0	44367
880-23914-A-31-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	44367

Lab Chronicle

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

Client Sample ID: SW07

Date Collected: 01/17/23 09:50
Date Received: 01/19/23 11:42

Lab Sample ID: 890-3889-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	44393	01/19/23 16:39	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44418	01/20/23 15:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44558	01/23/23 12:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			44547	01/23/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	44144	01/20/23 10:42	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44408	01/20/23 13:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44367	01/19/23 14:46	KS	EET MID
Soluble	Analysis	300.0		5			44405	01/20/23 11:57	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: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

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	T104704400-22-25	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: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

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: EP USA 5

Job ID: 890-3889-1
SDG: 03A1987013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3889-1	SW07	Solid	01/17/23 09:50	01/19/23 11:42	0 - 4

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

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Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	jhernandez@ensolum.com, jim.raley@dvn.com

Work Order Comments

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

Project Name:	EP USA 5	Turn Around	Pres. Code
Project Number:	03A1987013	☑ Routine ☐ Rush	
Project Location:	Eddy County, NM	Due Date: 24H TAT	
Sampler's Name:	Yocoly Edyte Konan	TAT starts the day received by the lab, if received by 4:30pm	
CC #:	1061232001		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR#7
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.6
Total Containers:		Corrected Temperature:	5.4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW04	S	01.17.23	9:50	0 - 4'	Comp	2	X	X	X

Parameters

Preservative Codes

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

Sample Comments

Incident Numbers
NMAP1826970471

01-18-2023

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Edyte Konan	Clae Cup	1.19.23 1142			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3889-1
SDG Number: 03A1987013

Login Number: 3889
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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3889-1
SDG Number: 03A1987013

Login Number: 3889
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/20/23 10:42 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Devon Team
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/6/2023 11:18:15 AM

JOB DESCRIPTION

EP USA 5
SDG NUMBER 03A1987013

JOB NUMBER

890-3982-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated
2/6/2023 11:18:15 AM

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

Client: Ensolum
Project/Site: EP USA 5

Laboratory Job ID: 890-3982-1
SDG: 03A1987013

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Job ID: 890-3982-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3982-1

Receipt
The sample was received on 1/30/2023 2:17 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SW06 (890-3982-1).

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

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-45400 and analytical batch 880-45483 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.

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: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Client Sample ID: SW06

Date Collected: 01/30/23 10:08
Date Received: 01/30/23 14:17
Sample Depth: 0-4'

Lab Sample ID: 890-3982-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/03/23 14:33	02/05/23 21:13	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/03/23 14:33	02/05/23 21:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/03/23 14:33	02/05/23 21:13	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		02/03/23 14:33	02/05/23 21:13	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/03/23 14:33	02/05/23 21:13	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/03/23 14:33	02/05/23 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*02/03/23 14:33*	*02/05/23 21:13*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*02/03/23 14:33*	*02/05/23 21:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			02/06/23 11:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/06/23 10:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9		mg/Kg		02/03/23 13:52	02/05/23 15:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/03/23 13:52	02/05/23 15:11	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/03/23 13:52	02/05/23 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*02/03/23 13:52*	*02/05/23 15:11*	*1*
o-Terphenyl	*80*		*70 - 130*	*02/03/23 13:52*	*02/05/23 15:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**236**		4.98		mg/Kg			02/03/23 20:58	1

Surrogate Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-24203-A-1-L MS	Matrix Spike	102	104
880-24203-A-1-M MSD	Matrix Spike Duplicate	113	100
890-3982-1	SW06	101	84
LCS 880-45402/1-A	Lab Control Sample	94	108
LCSD 880-45402/2-A	Lab Control Sample Dup	81	112
MB 880-45402/5-A	Method Blank	76	93

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3979-A-1-H MS	Matrix Spike	84	85
890-3979-A-1-I MSD	Matrix Spike Duplicate	90	90
890-3982-1	SW06	73	80
LCS 880-45400/2-A	Lab Control Sample	83	88
LCSD 880-45400/3-A	Lab Control Sample Dup	83	89
MB 880-45400/1-A	Method Blank	100	112

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45402/5-A
Matrix: Solid
Analysis Batch: 45524

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45402

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/23 14:33	02/05/23 13:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/23 14:33	02/05/23 13:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/23 14:33	02/05/23 13:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/23 14:33	02/05/23 13:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/23 14:33	02/05/23 13:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/23 14:33	02/05/23 13:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/03/23 14:33*	*02/05/23 13:19*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/03/23 14:33*	*02/05/23 13:19*	*1*

Lab Sample ID: LCS 880-45402/1-A
Matrix: Solid
Analysis Batch: 45524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45402

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1107		mg/Kg		111	70 - 130		
Toluene			0.100	0.09694		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.09355		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1876		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09162		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-45402/2-A
Matrix: Solid
Analysis Batch: 45524

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45402

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1288		mg/Kg		129	70 - 130	15	35
Toluene			0.100	0.1035		mg/Kg		104	70 - 130	7	35
Ethylbenzene			0.100	0.09460		mg/Kg		95	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1848		mg/Kg		92	70 - 130	1	35
o-Xylene			0.100	0.09047		mg/Kg		90	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-24203-A-1-L MS
Matrix: Solid
Analysis Batch: 45524

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45402

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0996	0.09296		mg/Kg		93	70 - 130		
Toluene	<0.00200	U	0.0996	0.08344		mg/Kg		84	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

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

Lab Sample ID: 880-24203-A-1-L MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45524 — **Prep Batch: 45402**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.0996	0.08079		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1695		mg/Kg		85	70 - 130
o-Xylene	<0.00200	U	0.0996	0.08347		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-24203-A-1-M MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45524 — **Prep Batch: 45402**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.08716		mg/Kg		88	70 - 130	6	35
Toluene	<0.00200	U	0.0990	0.08358		mg/Kg		84	70 - 130	0	35
Ethylbenzene	<0.00200	U	0.0990	0.08553		mg/Kg		86	70 - 130	6	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1810		mg/Kg		91	70 - 130	7	35
o-Xylene	<0.00200	U	0.0990	0.09245		mg/Kg		93	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-45400/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45483 — **Prep Batch: 45400**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/03/23 13:52	02/05/23 09:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/03/23 13:52	02/05/23 09:42	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/03/23 13:52	02/05/23 09:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*02/03/23 13:52*	*02/05/23 09:42*	*1*
o-Terphenyl	*112*		*70 - 130*	*02/03/23 13:52*	*02/05/23 09:42*	*1*

Lab Sample ID: LCS 880-45400/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45483 — **Prep Batch: 45400**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	999	849.7		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	999	1053		mg/Kg		105	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

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

Lab Sample ID: LCS 880-45400/2-A
Matrix: Solid
Analysis Batch: 45483

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45400

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: LCSD 880-45400/3-A
Matrix: Solid
Analysis Batch: 45483

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45400

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	680.4	*- *1	mg/Kg		68	70 - 130	22	20
Diesel Range Organics (Over C10-C28)			999	995.7		mg/Kg		100	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: 890-3979-A-1-H MS
Matrix: Solid
Analysis Batch: 45483

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45400

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 *- *1	1000	948.1		mg/Kg		91	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1005		mg/Kg		99	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-3979-A-1-I MSD
Matrix: Solid
Analysis Batch: 45483

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45400

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 *- *1	998	985.3		mg/Kg		95	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1080		mg/Kg		107	70 - 130	7	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	90		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45276/1-A
Matrix: Solid
Analysis Batch: 45421

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/03/23 19:19	1

Lab Sample ID: LCS 880-45276/2-A
Matrix: Solid
Analysis Batch: 45421

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.0		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-45276/3-A
Matrix: Solid
Analysis Batch: 45421

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	261.5		mg/Kg		105	90 - 110	4	20

Lab Sample ID: 890-3979-A-1-E MS
Matrix: Solid
Analysis Batch: 45421

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	40.2		251	310.5		mg/Kg		108	90 - 110		

Lab Sample ID: 890-3979-A-1-F MSD
Matrix: Solid
Analysis Batch: 45421

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	40.2		251	308.3		mg/Kg		107	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

GC VOA

Prep Batch: 45402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Total/NA	Solid	5035	
MB 880-45402/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45402/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45402/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24203-A-1-L MS	Matrix Spike	Total/NA	Solid	5035	
880-24203-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Total/NA	Solid	8021B	45402
MB 880-45402/5-A	Method Blank	Total/NA	Solid	8021B	45402
LCS 880-45402/1-A	Lab Control Sample	Total/NA	Solid	8021B	45402
LCSD 880-45402/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45402
880-24203-A-1-L MS	Matrix Spike	Total/NA	Solid	8021B	45402
880-24203-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45402

Analysis Batch: 45578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Total/NA	Solid	8015NM Prep	
MB 880-45400/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45400/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45400/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3979-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3979-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Total/NA	Solid	8015B NM	45400
MB 880-45400/1-A	Method Blank	Total/NA	Solid	8015B NM	45400
LCS 880-45400/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45400
LCSD 880-45400/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45400
890-3979-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	45400
890-3979-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45400

Analysis Batch: 45564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 45276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Soluble	Solid	DI Leach	
MB 880-45276/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45276/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45276/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

HPLC/IC (Continued)

Leach Batch: 45276 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3979-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3979-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 45421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3982-1	SW06	Soluble	Solid	300.0	45276
MB 880-45276/1-A	Method Blank	Soluble	Solid	300.0	45276
LCS 880-45276/2-A	Lab Control Sample	Soluble	Solid	300.0	45276
LCSD 880-45276/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45276
890-3979-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	45276
890-3979-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45276

Lab Chronicle

Client: Ensolum
Project/Site: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Client Sample ID: SW06

Date Collected: 01/30/23 10:08
Date Received: 01/30/23 14:17

Lab Sample ID: 890-3982-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	45402	02/03/23 14:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45524	02/05/23 21:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45578	02/06/23 11:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			45564	02/06/23 10:40	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45400	02/03/23 13:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45483	02/05/23 15:11	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	45276	02/02/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1			45421	02/03/23 20:58	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: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

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	T104704400-22-25	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: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

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	EPA	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

EPA = US Environmental Protection Agency

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: EP USA 5

Job ID: 890-3982-1
SDG: 03A1987013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3982-1	SW06	Solid	01/30/23 10:08	01/30/23 14:17	0-4'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

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Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum	Company Name:	WPX Energy
Address:	3122 National Parks HWY	Address:	5315 Buena Vista Dr.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	832-541-7719	Email:	jhernandez@ensolum.com, jim.raley@dvn.com

Work Order Comments

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

Project Name:	EP USA 5	Turn Around	☐ Routine ☑ Rush
Project Number:	03A1987013	Due Date:	24Hr TAT
Project Location:	Rural Eddy, NM		TAT starts the day received by the lab, if received by 4:30pm
Sampler's Name:	Yocoly Edyte Konan		
CC #:	1061232001		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	THM207	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2	
Total Containers:		Corrected Temperature:	5.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SW06	S	1/4/2023	10:08	0' - 4'	Comp	1		X	X	X

890-3982 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID
NMAP1826970471

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Edyte Konan	Amanda Estep	1-30-23 1417	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3982-1
SDG Number: 03A1987013

Login Number: 3982
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3982-1
SDG Number: 03A1987013

Login Number: 3982
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/03/23 01:00 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	

ENSOLUM

APPENDIX E

Email Correspondence

Joseph Hernandez

From: Anna Byers
Sent: Thursday, June 9, 2022 12:09 PM
To: ocd.enviro@state.nm.us; Morgan, Crisha A; 'CFO_Spill, BLM_NM'
Cc: jim.raley@dvn.com; Devon-Team
Subject: WPX Site Activity Update for Week of June 13, 2022

Good afternoon,

WPX anticipates conducting final confirmation soil sampling activities at the following site between June 13 through June 17, 2022:

Site: RDX Federal 21 #044
API: 30-015-41193
Incident Number: nAPP2115533694

Site: RDX Federal 28 #011
API: 30-015-42109
Incident Number: nAPP2215732821

Site: EP USA #005
API: 30-015-25020
Incident Number: NMAP1826970471

Thank you,

Anna Byers
Project Geologist
575-200-6754
Ensolum, LLC

Erick Herrera

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, January 12, 2023 11:43 AM
To: Erick Herrera
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] WPX Site Sampling Activity Update (1/16 - 1/20)

[**EXTERNAL EMAIL**]

Erick,

Thank you for the notification. Please note that 01/16/2023 is a Holiday. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// www.emnrd.nm.gov

From: Erick Herrera <eherrera@ensolum.com>
Sent: Thursday, January 12, 2023 9:00 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; 'CFO_Spill, BLM_NM' <blm_nm_cfo_spill@blm.gov>
Cc: Raley, Jim <jim.raley@dvn.com>; Devon Team <Devon-Team@ensolum.com>
Subject: [EXTERNAL] WPX Site Sampling Activity Update (1/16 - 1/20)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between January 16 – January 20, 2023:

Site Name: Saragossa/Happy Valley Compressor Station
API: 30-015-31584
Incident Number: nJMW1229041186

Site Name: LVP SWD #001
API: 30-015-42234
Incident Number: nAPP2135033453

Site Name: EP USA #005
API: 30-015-25020
Incident Number: NMAP1826970471

Thank you,

Erick Herrera
Staff Geologist
281-777-4152
Ensolum, LLC

Erick Herrera

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Monday, January 30, 2023 9:40 AM
To: Erick Herrera
Cc: Nobui, Jennifer, EMNRD; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] WPX Site Sampling Activity Update (1/30 - 2/3)

[**EXTERNAL EMAIL**]

Erick,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// www.emnrd.nm.gov

From: Erick Herrera <eherrera@ensolum.com>
Sent: Thursday, January 26, 2023 11:27 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; 'CFO_Spill, BLM_NM' <blm_nm_cfo_spill@blm.gov>
Cc: Raley, Jim <jim.raley@dvn.com>; Devon Team <Devon-Team@ensolum.com>
Subject: [EXTERNAL] WPX Site Sampling Activity Update (1/30 - 2/3)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good Afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between January 30 – February 3, 2023:

Site Name: EP USA #005
API: 30-015-25020
Incident Number: NMAP1826970471

Site Name: North Brushy PW Line
Incident Number: nAPP2231126594

Thank you,

Erick Herrera
Staff Geologist
281-777-4152
Ensolum, LLC

From: Raley, Jim
To: Robert.hamlet@state.nm.us
Cc: Devon-Team
Subject: EP USA 5 -Extension Request
Date: Monday, December 12, 2022 4:05:41 PM
Attachments: image001.png

[**EXTERNAL EMAIL**]

Robert,

WPX Energy Permian, LLC (WPX) is requesting an extension to the current deadline for a closure report for the approved work plan required in 19.15.29.12.B.(1) NMAC at the EP USA #005.

An oil and produced water release was discovered on September 17, 2018 and assigned Incident Number NMAP1826970471. WPX submitted a remediation work plan that was subsequently approved by the NMOCD on September 19, 2022. Remediation and preparation activities have initiated but were temporarily suspended to coordinate with operational and reclamation activities at the Site. Remediation activities are anticipated to resume by the end of the December.

To provide enough time for remediation work and the completion of a closure report, WPX requests an extension of the deadline to **March 18, 2023.**

Jim Raley | Environmental Professional - Permian Basin
5315 Buena Vista Dr., Carlsbad, NM 88220
C: (575)689-7597 | jim.raley@dvn.com

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 196982

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 196982
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please implement 19.15.29.13 NMAC when completing P&A.	3/21/2023