Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID:	nAB1625254125
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: 1/17/2023

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

OCD Only

Received by: Jocelyn Harimon Date: 01/17/2023

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: Robert Hamlet Date: 5/16/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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

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

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 07 2016
RECEIVED

Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company WPX Energy Inc/RKI 241289	Contact Karolina Blaney
Address 5315 Buena Vista Dr.	Telephone No. 970 589 0743
Facility Name: Saragossa 16 State 2	Facility Type: Well Pad

Surface Owner: State	Mineral Owner: State	API No. 30-015- 31584

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	16	23S	23E	660	FNL	990	FEL	Eddy

Latitude: 32.30961139N **Longitude:** -104.2924387W

NATURE OF RELEASE

Type of Release. produced water and condensate	Volume of Release: 81 Bbls	Volume Recovered: 0 Bbls
Source of Release Tank Battery	Date and Hour of Occurrence 8/23/2016	Date and Hour of Discovery 8/24/2016 – 10:45 hrs MT
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD Heather Patterson and Michael Bratcher, and SLO Amber Groves.	
By Whom? Karolina Blaney	Date and Hour 8/24/2016 – 15:00 hrs MT	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* N/A

Describe Cause of Problem and Remedial Action Taken.*

The spill was caused by a lightning strike followed by a fire. Total volume of fluid lost is 81 bbls (61 bbls of condensate and 20 bbls of water). The condensate burnt off causing minimal impact to the environment.

Describe Area Affected and Cleanup Action Taken.*

The entire spill was contained on the well pad. The impacted soil was sampled for BTEX, TPH, and Chlorides. Any additional remedial actions, if warranted, will be based on these results. The total ranking score for this site is 0; the site will be remediated to levels specified in 0-9 column of the Guidelines document. This spill did not impact drainages or surface water.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Karolina Blaney

Printed Name: Karolina Blaney

Title: Environmental Specialist

E-mail Address: Karolina.blaney@wpxenergy.com

Date: 9/7/2016 Phone: 970-589-0743

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 9/8/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 10/9/16

2RP-3869

* Attach Additional Sheets If Necessary

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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:	nAB1625254125
District RP:	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC	OGRID: 246289
Contact Name: Jim Raley	Contact Telephone: 575-689-7597
Contact email: jim.raley@dvn.com	Incident # *(assigned by OCD):* nAB1625254125
Contact mailing address: 5315 Buena Vista Dr., Carlsbad, NM, 88220	

Location of Release Source

Latitude 32.30961139 Longitude -104.2924387
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Saragossa 16 State 2	Site Type: Well Pad
Date Release Discovered: 8/23/2016	API# *(if applicable)*: 30-015-31584

Unit Letter	Section	Township	Range	County
A	16	23S	23E	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)	Volume Recovered (bbls):0 Bbls
☒ Produced Water	Volume Released (bbls): 20 Bbls	Volume Recovered (bbls):0 Bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): 61 Bbls	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

The spill was caused by a lightning strike followed by a fire. Total volume of fluid lost is 81 bbls (61 bbls of condensate and 20 bbls of water). The condensate burnt off causing minimal impact to the environment.

$$bbl\ estimate = \frac{saturated\ soil\ volume(ft^3)}{4.21(\frac{ft^3}{bbl\ equivalent})} * estimated\ soil\ porosity\ (\%) + recovered$$

State of New Mexico
Oil Conservation Division

Incident ID:	nAB1625254125
District RP:	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The source of the release was greater than 25 bbls and caused a fire.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice was given to NMOCD Heather Patterson and Michael Bratcher, and EMNRD Amber Groves via email by Karolina Blaney on September 7, 2016.

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 Professional

Signature: Jim Raley Date: 1/17/2023

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID:	nAB1625254125
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?	>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.

State of New Mexico
Oil Conservation Division

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Printed Name: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 1/17/2023

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

OCD Only

Received by: Jocelyn Harimon Date: 01/17/2023

State of New Mexico
Oil Conservation Division

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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)

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☒ Description of remediation activities

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Printed Name: Jim Raley Title: Environmental Professional

Signature: Jim Raley Date: 1/17/2023

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

OCD Only

Received by: Jocelyn Harimon Date: 01/17/2023

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Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

CLOSURE REQUEST REPORT

Site Location:

Saragossa 16 State 2
Eddy County, New Mexico
Incident Number
nAB1625254125

January 17, 2023
Ensolum Project No. 03A1987017

Prepared for:

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

Prepared by:

Joseph S. Hernandez
Senior Geologist

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

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

Ensolum, LLC (Ensolum) has prepared this Closure Request Report (CRR) to document corrective actions and follow up soil sampling activities performed by WPX Energy Permian, LLC (WPX) at the Saragossa 16 State 2 (hereinafter referred to as the "Site") in Unit A, Section 16, Township 23 South, Range 23 East, in Eddy County, New Mexico (**Figure 1** in **Appendix A**). The corrective actions have been completed in accordance with New Mexico Oil and Conservation Division (NMOCD) regulatory requirements and guidelines.

WPX respectfully submits this CRR, which summarizes initial response activities and soil sampling activities for a reportable release of produced water and condensate, then provides field verification of a nearby United States Geological Survey (USGS) well and updated depth to groundwater data for a water well within ½ mile of the Site identified in the New Mexico Office of the State Engineer (NMOSE) database.

1.1 Site Description & Background

The Site is located within Eddy County, New Mexico (32.309611° N, 104.292438° W) and is associated with oil and gas exploration and production operations on State Land (**Figure 1** in **Appendix A**).

On August 23, 2016, lightning struck the facility tank battery, causing a fire and resulting in the release of approximately 20 barrels (bbls) of produced water and 61 bbls condensate within the earthen tank battery containment. The condensate burned off, and no fluids were recovered. The release was a mapped via Global Positioning System (GPS) by WPX and is shown on (**Figure 2** in **Appendix A**). Currently, the tank battery has been rebuilt and relocated northeast of its original location. Ensolum was retained to confirm impacted soil was removed during response and relocation activities.

WPX reported the release to the NMOCD immediately after the discovery via email on August 24, 2016 and with a subsquent Corrective Action Form C-141 (Form C-141) on September 7, 2016. The release was assigned Incident Number nAB1625254125. An updated Form C-141 (current revision August 24, 2018) is provided in this CRR.

1.2 Site Characterization

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

Based on the initial desktop review, it appeared that the closest water well with groundwater data was USGS water well 321826104173801, located 0.17 miles southwest of the Site. The USGS well was presumed to be located on private mining land operated by United Materials, LLP. (United). Ensolum coordinated a field verification visit with United to verify the location of the well. No well was identified during the investigation, which included a visual survey of a 500-foot radius of the documented latitude and longitude. United was unaware of the presence of a well in the area. Therefore, the next closest water well was used to estimate groundwater depth at the Site.

The next closest water well is NMOSE-permitted well C-02395, located approximately 0.32 miles southwest of the Site. Due to the age the last measurement of the well (greater than 25 years old), Ensolum coordinated a visit with the well owner, Justin D. Wilson, on August 15, 2022, to measure groundwater depth. Ensolum advanced a decontamined water level meter, which

utlimately reached the maximum length of 200 feet without detecting water. Groundwater at the Site was confirmed to be greater than 100 feet below ground surface (bgs). The well record and the current Groundwater Measurement Form is provided in **Appendix B.** Photographic documentation during the water well verification and measurement activities is included in **Appendix C**.

The closest surface water or significant watercourse to the Site is a dry streambed, located approximately 5,683 feet west of the Site. The Site is greater than 300 feet from any occupied residence, school, hospital, institution, church, or wetland and, with the absence of the USGS well, greater than 1,000 feet to a freshwater well or spring. The Site is not within a 100-year floodplain. This Site is located in a medium potential karst area.

Based on the results of the Site Characterization and recently measurement of NMOSE well C-02395, the following NMOCD Table 1 Closure Criteria (Closure Criteria) applied:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total Petroleum Hydrocarbon (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- Total Petroleum Hydrocarbon (TPH): 2,500 mg/kg
- Chloride: 20,000 mg/kg

2.0 SOIL SAMPLING ACTIVITIES

2.1 Delineation Activities

Between August 30, 2022 and September 7, 2022, site assessment and delineation activities were conducted by Ensolum to characterize the subject release by verifying the presence or absence of impacted soil. Delineation soil samples were collected in boreholes advanced via hand auger (samples designated BH) within the accessible portions of the release footprint. Delineation 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. A total of two soil samples were collected from each delineation soil sample location (BH01 and BH02): the sample with the highest observed field screening (0.5-foot bgs) and the greatest depth (1-foot bgs). The location of the delineation soil samples are shown in **Figure 2** in **Appendix A**. Field screening results and observations for each delineation soil sample were recorded on lithologic soil sampling logs (**Appendix D**). Photographic documentation during delineation activities is included in **Appendix C**.

The soil samples were placed directly into a pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 6 degrees Celsius (°C), under strict chain-of-custody procedures, to Eurofins LLC (Eurofins) in Carlsbad, New Mexico, for analysis of constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0.

3.0 SOIL SAMPLING RESULTS

Laboratory analytical results for delineation soil samples BH01 and BH02 indicated COCs were below the applicable Closure Criteria for the Site and delineated to the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized on **Table 1** in **Appendix E**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix F**.

Appendix G provides correspondence email notification receipts associated with the subject release.

4.0 CLOSURE REQUEST

The primary objectives of Ensolum's scope of services were to conduct site assessment and delineation soil sampling activities in order to confirm the presence or absence of impacted soil in accordance with the applicable NMOCD regulatory guidelines. Based on the results documented in this report, the following findings and conclusions regarding the release are presented:

- Initial efforts performed by WPX included rebuilding and relocating the tank battery northeast of its original location. Ensolum was retained to confirm residual soils accessible from the release event were removed during response and relocation activities. Laboratory analytical results for delineation soil samples collected from the former tank battery earthen containment indicated COCs were within the applicable Closure Criteria for the Site based on a confirmed depth to groundwater greater than 100 feet bgs and that impacted soil associated with the release event was successfully addressed; and

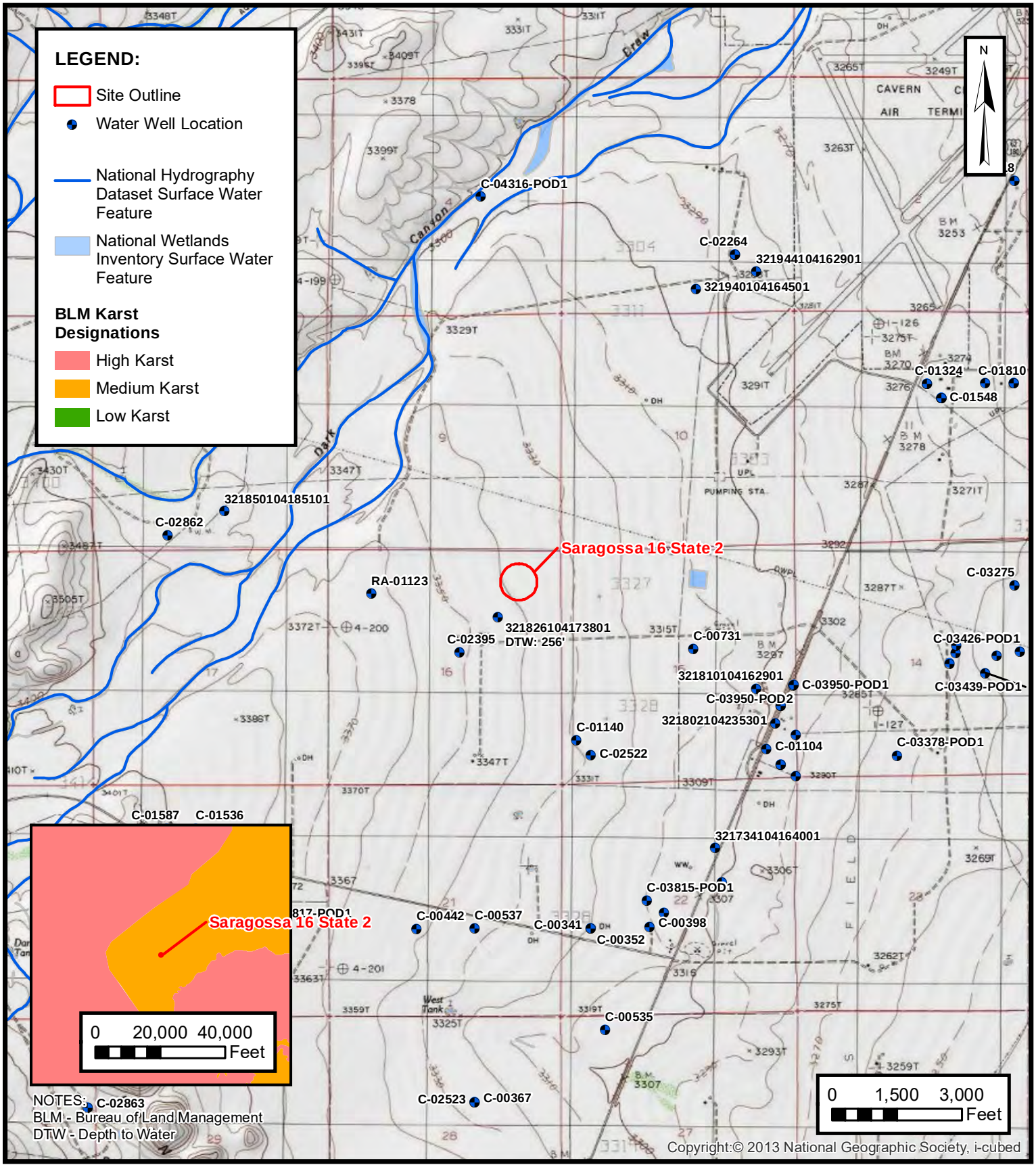
- The delineation samples also meet the reclamation requirement for chloride and TPH concentrations in the top four feet of the subsurface.

Based on the conclusions presented, WPX believes the remediation 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 No Further Action of Incident Number nAB1625254125.

ENSOLUM

APPENDIX A

Figures



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE MAP

WPX ENERGY PERMIAN, LLC
SARAGOSSA 16 STATE 2
Unit A Sec 16 T23S R23E
Eddy County, New Mexico

FIGURE

1

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

DELINEATION SOIL SAMPLE LOCATIONS

WPX ENERGY PERMIAN, LLC
SARAGOSSA 16 STATE 2
Unit A Sec 21 T26S R30E
Eddy County, New Mexico

FIGURE

2

ENSOLUM

APPENDIX B

Well Record

Client: Devon Energy

Project Name: Saragossa 16 State 2

Project Location: Water Well (Permit# C-02395)

Project Manager: Joseph Hernandez

GROUNDWATER SAMPLING FORM

SAMPLING INFORMATION

Soil Boring / Monitor Well Number: NA

Project #: 03A1987017

Date Completed: 8/15/2022

Type of Water Quality Meter: NA

Total Depth of Monitor Well: Unknown

Date Calibrated: NA

Screen Interval: Unknown

Other Notes: Advanced water level indicator to maximum length of 200' without detecting water. Decontaminated water level indicator meter was used to measure groundwater depth in existing well. Land owner provided access to the water well.

Sample Tubing Intake Depth: NA

Geologist: Gilbert Moreno

Monitor Well Detail	Tubing Placement	GW Depth (static)	After Purge

Time (minutes)	Purge Rate (L/min)	Temp. (ºC)	pH (unitless)	DO (mg/L)	ORP (mV)	Cond. (mS/cm)	GW Depth (feet)
NR	NR	NR	NR	NR	NR	NR	>200'

Comments:

NA = Not Available
NR = Not Recorded

ENSOLUM

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 02395 **Subbasin:** C **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

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

Total Diversion: 3 **Cause/Case:** -

Owner: JUSTIN D WILSON

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	711992	COWNF	2021-11-03	CHG	PRC	C 02395	T		0	
get images	623603	72121	2018-04-17	PMT	APR	C 02395	T		3	
get images	623604	COWNF	2018-03-26	CHG	PRC	C 02395	T		0	
get images	465653	72121	1997-09-16	EXP	EXP	C 02395	T		3	
get images	465651	72121	1997-05-15	EXP	EXP	C 02395	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02395	NA		3	3	2	16	23S	26E	566160	3574477	GRAZING LEASE #GO-1684

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
WPX Energy Permian, LLC
Saragossa 16 State 2
Incident Number: nAB1625254125

Photograph: 1 Date: 8/24/2016
Description: Release point.
View: Northeast

Photograph: 2 Date: 9/14/2016
Description: Release area following tank battery relocation.
View: South

Photograph: 3 Date: 8/30/2022
Description: Site Assessment
View: South

Photograph: 4 Date: 7/29/2022
Description: USGS water well verification.
View: Southeast

ENSOLUM

Photographic Log
WPX Energy Permian, LLC
Saragossa 16 State 2
Incident Number: nAB1625254125

Photograph: 5 Date: 8/15/2022
Description: Depth to water measurement.
View: Northeast

Photograph: 6 Date: 9/7/2022
Description: Site during delineation activities
View: East

ENSOLUM

APPENDIX D

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 09/07/2022
	Site Name: Saragossa 16 State 2	
	Incident Number: nAB1625254125	
	Job Number: 03A1987017	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: SK	Method: Hand Auger
Coordinates: 32.30961139N, 104.2924387°W	Hole Diameter: 2.5 inches	Total Depth: 1'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	0.7	N	BH01	0.5	0.5	CCHE	(0-1') CALICHE, with gravel, very silty, no odor, no staining.
D	414	0.6	N	BH01	1	1		

Total Depth: 1 foot bgs.

ENSOLUM

	Sample Name: BH02	Date: 09/07/2022
	Site Name: Saragossa 16 State 2	
	Incident Number: nAB1625254125	
	Job Number: 03A1987017	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: SK	Method: Hand Auger
Coordinates: 32.30961139N, 104.2924387°W	Hole Diameter: 2.5 inches	Total Depth: 1'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	0.9	N	BH02	0.5	0.5	CCHE	(0-1') CALICHE, with gravel, very silty, no odor, no staining.
D	<168	0.5	N	BH02	1	1		

Total Depth: 1 foot bgs.

ENSOLUM

APPENDIX E

Tables

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
WPX Energy Permian, LLC - Saragossa 16 State 2
Eddy County, New Mexico

Ensolum Project No. 03A1987017

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Delineation Soil Sample Analytical Results										
BH01	09/07/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	32.0
BH01	09/07/2022	1	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	433
BH02	09/07/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	22.3
BH02	09/07/2022	1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	21.6

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

*Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria and/or Reclamation Standard for Soils Impacted by a Release*

ENSOLUM

APPENDIX F

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: 890-2894-1
Laboratory Sample Delivery Group: 03A1987017
Client Project/Site: Saragossa 16 State 2

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

Attn: Devon Team

JKramer

Authorized for release by:
9/21/2022 1:49:35 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: Saragossa 16 State 2

Laboratory Job ID: 890-2894-1
SDG: 03A1987017

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2894-1
Project/Site: Saragossa 16 State 2 SDG: 03A1987017

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Job ID: 890-2894-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2894-1

Receipt
The samples were received on 9/8/2022 8:15 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 6.0°C

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: BH01 (890-2894-1), BH01 (890-2894-2), BH02 (890-2894-3) and BH02 (890-2894-4). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to <CHOOSE_ONE> proceed with/cancel analysis.
890-2894
Temp Blank 6.2 c/ 6.0 c client says they were in hte fridge overnight and was taken out this am- would like to proceed with processing.

GC VOA
Method 8021B: The LCS was biased high for o-xylene. Since the method requires either an acceptable LCS or LCSD, the data was qualified and reported. (LCSD 880-34678/2-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34678 and analytical batch 880-34891 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH02 (890-2894-3), (LCSD 880-34678/2-A), (890-2892-A-1-G MS) and (890-2892-A-1-H MSD). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-34144/2-A) and (LCSD 880-34144/3-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Client Sample ID: BH01

Lab Sample ID: 890-2894-1
Matrix: Solid
Date Collected: 09/07/22 13:00
Date Received: 09/08/22 08:15
Sample Depth: 0.5

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		09/16/22 13:28	09/20/22 22:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/16/22 13:28	09/20/22 22:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/16/22 13:28	09/20/22 22:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/16/22 13:28	09/20/22 22:22	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		09/16/22 13:28	09/20/22 22:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/16/22 13:28	09/20/22 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/16/22 13:28*	*09/20/22 22:22*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*09/16/22 13:28*	*09/20/22 22:22*	*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			09/21/22 09:38	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			09/12/22 11:26	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		09/10/22 08:45	09/10/22 11:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/10/22 08:45	09/10/22 11:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/10/22 08:45	09/10/22 11:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*09/10/22 08:45*	*09/10/22 11:10*	*1*
o-Terphenyl	*86*		*70 - 130*	*09/10/22 08:45*	*09/10/22 11:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.0**		4.96		mg/Kg			09/13/22 14:04	1

Client Sample ID: BH01

Lab Sample ID: 890-2894-2
Matrix: Solid
Date Collected: 09/07/22 13:10
Date Received: 09/08/22 08:15
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/16/22 13:28	09/20/22 22:42	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/16/22 13:28	09/20/22 22:42	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/16/22 13:28	09/20/22 22:42	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/16/22 13:28	09/20/22 22:42	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		09/16/22 13:28	09/20/22 22:42	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/16/22 13:28	09/20/22 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*09/16/22 13:28*	*09/20/22 22:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Client Sample ID: BH01

Lab Sample ID: 890-2894-2
Matrix: Solid
Date Collected: 09/07/22 13:10
Date Received: 09/08/22 08:15
Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*09/16/22 13:28*	*09/20/22 22:42*	*1*

Method: 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			09/21/22 09:38	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			09/12/22 11:26	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		09/10/22 08:45	09/10/22 12:15	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/10/22 08:45	09/10/22 12:15	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/10/22 08:45	09/10/22 12:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*79*		*70 - 130*	*09/10/22 08:45*	*09/10/22 12:15*	*1*
o-Terphenyl	*87*		*70 - 130*	*09/10/22 08:45*	*09/10/22 12:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**433**		5.04		mg/Kg			09/13/22 14:09	1

Client Sample ID: BH02

Lab Sample ID: 890-2894-3
Matrix: Solid
Date Collected: 09/07/22 13:20
Date Received: 09/08/22 08:15
Sample Depth: 0.5

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		09/16/22 13:28	09/20/22 23:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/16/22 13:28	09/20/22 23:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/16/22 13:28	09/20/22 23:03	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/16/22 13:28	09/20/22 23:03	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		09/16/22 13:28	09/20/22 23:03	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/16/22 13:28	09/20/22 23:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*09/16/22 13:28*	*09/20/22 23:03*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*09/16/22 13:28*	*09/20/22 23:03*	*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			09/21/22 09:38	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			09/12/22 11:26	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Client Sample ID: BH02
Date Collected: 09/07/22 13:20
Date Received: 09/08/22 08:15
Sample Depth: 0.5

Lab Sample ID: 890-2894-3
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		09/10/22 08:45	09/10/22 12:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/10/22 08:45	09/10/22 12:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/10/22 08:45	09/10/22 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*09/10/22 08:45*	*09/10/22 12:37*	*1*
o-Terphenyl	*88*		*70 - 130*	*09/10/22 08:45*	*09/10/22 12:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.3**		4.97		mg/Kg			09/13/22 14:14	1

Client Sample ID: BH02
Date Collected: 09/07/22 13:30
Date Received: 09/08/22 08:15
Sample Depth: 1

Lab Sample ID: 890-2894-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/16/22 13:28	09/20/22 23:23	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/16/22 13:28	09/20/22 23:23	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/16/22 13:28	09/20/22 23:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/16/22 13:28	09/20/22 23:23	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		09/16/22 13:28	09/20/22 23:23	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/16/22 13:28	09/20/22 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*09/16/22 13:28*	*09/20/22 23:23*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/16/22 13:28*	*09/20/22 23:23*	*1*

Method: 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			09/21/22 09:38	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			09/12/22 11:26	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		09/10/22 08:45	09/10/22 12:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/10/22 08:45	09/10/22 12:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/10/22 08:45	09/10/22 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*09/10/22 08:45*	*09/10/22 12:59*	*1*
o-Terphenyl	*82*		*70 - 130*	*09/10/22 08:45*	*09/10/22 12:59*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Client Sample ID: BH02

Date Collected: 09/07/22 13:30
Date Received: 09/08/22 08:15
Sample Depth: 1

Lab Sample ID: 890-2894-4

Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.6		5.02		mg/Kg			09/13/22 14:18	1

Surrogate Summary

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2892-A-1-G MS	Matrix Spike	103	67 S1-
890-2892-A-1-H MSD	Matrix Spike Duplicate	162 S1+	94
890-2894-1	BH01	115	85
890-2894-2	BH01	118	83
890-2894-3	BH02	95	68 S1-
890-2894-4	BH02	116	86
LCS 880-34678/1-A	Lab Control Sample	113	87
LCSD 880-34678/2-A	Lab Control Sample Dup	151 S1+	99
MB 880-34678/5-A	Method Blank	103	86
MB 880-34854/5-A	Method Blank	98	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2894-1	BH01	78	86
890-2894-1 MS	BH01	89	93
890-2894-1 MSD	BH01	89	91
890-2894-2	BH01	79	87
890-2894-3	BH02	80	88
890-2894-4	BH02	75	82
LCS 880-34144/2-A	Lab Control Sample	116	133 S1+
LCSD 880-34144/3-A	Lab Control Sample Dup	114	132 S1+
MB 880-34144/1-A	Method Blank	96	108

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34678/5-A
Matrix: Solid
Analysis Batch: 34891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34678

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/16/22 13:28	09/20/22 21:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/16/22 13:28	09/20/22 21:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/16/22 13:28	09/20/22 21:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/16/22 13:28	09/20/22 21:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/16/22 13:28	09/20/22 21:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/16/22 13:28	09/20/22 21:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*09/16/22 13:28*	*09/20/22 21:19*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*09/16/22 13:28*	*09/20/22 21:19*	*1*

Lab Sample ID: LCS 880-34678/1-A
Matrix: Solid
Analysis Batch: 34891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34678

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07760		mg/Kg		78	70 - 130
Toluene	0.100	0.08472		mg/Kg		85	70 - 130
Ethylbenzene	0.100	0.09373		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.1798		mg/Kg		90	70 - 130
o-Xylene	0.100	0.1026		mg/Kg		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: LCSD 880-34678/2-A
Matrix: Solid
Analysis Batch: 34891

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34678

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09317		mg/Kg		93	70 - 130	18	35
Toluene	0.100	0.09586		mg/Kg		96	70 - 130	12	35
Ethylbenzene	0.100	0.1123		mg/Kg		112	70 - 130	18	35
m-Xylene & p-Xylene	0.200	0.2477		mg/Kg		124	70 - 130	32	35
o-Xylene	0.100	0.1428	*+	mg/Kg		143	70 - 130	33	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*151*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2892-A-1-G MS
Matrix: Solid
Analysis Batch: 34891

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1 F2	0.0998	0.01067	F1	mg/Kg		11	70 - 130
Toluene	<0.00201	U F1 F2	0.0998	0.01385	F1	mg/Kg		13	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

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

Lab Sample ID: 890-2892-A-1-G MS
Matrix: Solid
Analysis Batch: 34891

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 34678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1 F2	0.0998	0.01551	F1	mg/Kg		16	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.02900	F1	mg/Kg		15	70 - 130
o-Xylene	<0.00201	U *+ F1 F2	0.0998	0.01743	F1	mg/Kg		17	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*

Lab Sample ID: 890-2892-A-1-H MSD
Matrix: Solid
Analysis Batch: 34891

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 34678

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1 F2	0.0990	0.04386	F1 F2	mg/Kg		44	70 - 130	122	35
Toluene	<0.00201	U F1 F2	0.0990	0.04253	F1 F2	mg/Kg		42	70 - 130	102	35
Ethylbenzene	<0.00201	U F1 F2	0.0990	0.05157	F1 F2	mg/Kg		52	70 - 130	108	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.198	0.1069	F1 F2	mg/Kg		54	70 - 130	115	35
o-Xylene	<0.00201	U *+ F1 F2	0.0990	0.06079	F1 F2	mg/Kg		61	70 - 130	111	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*162*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 880-34854/5-A
Matrix: Solid
Analysis Batch: 34891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34854

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:55	09/20/22 10:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:55	09/20/22 10:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:55	09/20/22 10:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/19/22 14:55	09/20/22 10:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/19/22 14:55	09/20/22 10:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/19/22 14:55	09/20/22 10:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*09/19/22 14:55*	*09/20/22 10:44*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/19/22 14:55*	*09/20/22 10:44*	*1*

QC Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

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

Lab Sample ID: MB 880-34144/1-A
Matrix: Solid
Analysis Batch: 34141

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34144

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		09/10/22 08:45	09/10/22 10:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/10/22 08:45	09/10/22 10:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/10/22 08:45	09/10/22 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*09/10/22 08:45*	*09/10/22 10:04*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/10/22 08:45*	*09/10/22 10:04*	*1*

Lab Sample ID: LCS 880-34144/2-A
Matrix: Solid
Analysis Batch: 34141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	819.2		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	1000	765.4		mg/Kg		77	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*133*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-34144/3-A
Matrix: Solid
Analysis Batch: 34141

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 34144

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	844.5		mg/Kg		84	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	758.8		mg/Kg		76	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*132*	*S1+*	*70 - 130*

Lab Sample ID: 890-2894-1 MS
Matrix: Solid
Analysis Batch: 34141

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 34144

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	997	899.6		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	730.7		mg/Kg		70	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

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

Lab Sample ID: 890-2894-1 MS
Matrix: Solid
Analysis Batch: 34141

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 34144

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 890-2894-1 MSD
Matrix: Solid
Analysis Batch: 34141

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 34144

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	878.0		mg/Kg		86	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	733.6		mg/Kg		70	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34100/1-A
Matrix: Solid
Analysis Batch: 34369

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			09/13/22 12:02	1

Lab Sample ID: LCS 880-34100/2-A
Matrix: Solid
Analysis Batch: 34369

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	240.2		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-34100/3-A
Matrix: Solid
Analysis Batch: 34369

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	240.3		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-2892-A-8-B MS
Matrix: Solid
Analysis Batch: 34369

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	223		249	473.2		mg/Kg		100	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2892-A-8-C MSD
Matrix: Solid
Analysis Batch: 34369

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	223		249	472.5		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

GC VOA

Prep Batch: 34678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Total/NA	Solid	5035	
890-2894-2	BH01	Total/NA	Solid	5035	
890-2894-3	BH02	Total/NA	Solid	5035	
890-2894-4	BH02	Total/NA	Solid	5035	
MB 880-34678/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34678/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34678/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2892-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2892-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 34854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34854/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 34891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Total/NA	Solid	8021B	34678
890-2894-2	BH01	Total/NA	Solid	8021B	34678
890-2894-3	BH02	Total/NA	Solid	8021B	34678
890-2894-4	BH02	Total/NA	Solid	8021B	34678
MB 880-34678/5-A	Method Blank	Total/NA	Solid	8021B	34678
MB 880-34854/5-A	Method Blank	Total/NA	Solid	8021B	34854
LCS 880-34678/1-A	Lab Control Sample	Total/NA	Solid	8021B	34678
LCSD 880-34678/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34678
890-2892-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	34678
890-2892-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34678

Analysis Batch: 35021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Total/NA	Solid	Total BTEX	
890-2894-2	BH01	Total/NA	Solid	Total BTEX	
890-2894-3	BH02	Total/NA	Solid	Total BTEX	
890-2894-4	BH02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Total/NA	Solid	8015B NM	34144
890-2894-2	BH01	Total/NA	Solid	8015B NM	34144
890-2894-3	BH02	Total/NA	Solid	8015B NM	34144
890-2894-4	BH02	Total/NA	Solid	8015B NM	34144
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015B NM	34144
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34144
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34144
890-2894-1 MS	BH01	Total/NA	Solid	8015B NM	34144
890-2894-1 MSD	BH01	Total/NA	Solid	8015B NM	34144

Prep Batch: 34144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

GC Semi VOA (Continued)

Prep Batch: 34144 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-2	BH01	Total/NA	Solid	8015NM Prep	
890-2894-3	BH02	Total/NA	Solid	8015NM Prep	
890-2894-4	BH02	Total/NA	Solid	8015NM Prep	
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2894-1 MS	BH01	Total/NA	Solid	8015NM Prep	
890-2894-1 MSD	BH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Total/NA	Solid	8015 NM	
890-2894-2	BH01	Total/NA	Solid	8015 NM	
890-2894-3	BH02	Total/NA	Solid	8015 NM	
890-2894-4	BH02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Soluble	Solid	DI Leach	
890-2894-2	BH01	Soluble	Solid	DI Leach	
890-2894-3	BH02	Soluble	Solid	DI Leach	
890-2894-4	BH02	Soluble	Solid	DI Leach	
MB 880-34100/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34100/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34100/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2892-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2892-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2894-1	BH01	Soluble	Solid	300.0	34100
890-2894-2	BH01	Soluble	Solid	300.0	34100
890-2894-3	BH02	Soluble	Solid	300.0	34100
890-2894-4	BH02	Soluble	Solid	300.0	34100
MB 880-34100/1-A	Method Blank	Soluble	Solid	300.0	34100
LCS 880-34100/2-A	Lab Control Sample	Soluble	Solid	300.0	34100
LCSD 880-34100/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34100
890-2892-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	34100
890-2892-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34100

Lab Chronicle

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Client Sample ID: BH01

Date Collected: 09/07/22 13:00
Date Received: 09/08/22 08:15

Lab Sample ID: 890-2894-1

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	34678	09/16/22 13:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34891	09/20/22 22:22	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35021	09/21/22 09:38	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34280	09/12/22 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34144	09/10/22 08:45	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34141	09/10/22 11:10	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34100	09/09/22 12:23	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34369	09/13/22 14:04	CH	EET MID

Client Sample ID: BH01

Date Collected: 09/07/22 13:10
Date Received: 09/08/22 08:15

Lab Sample ID: 890-2894-2

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			5.05 g	5 mL	34678	09/16/22 13:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34891	09/20/22 22:42	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35021	09/21/22 09:38	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34280	09/12/22 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34144	09/10/22 08:45	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34141	09/10/22 12:15	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34100	09/09/22 12:23	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34369	09/13/22 14:09	CH	EET MID

Client Sample ID: BH02

Date Collected: 09/07/22 13:20
Date Received: 09/08/22 08:15

Lab Sample ID: 890-2894-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34678	09/16/22 13:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34891	09/20/22 23:03	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35021	09/21/22 09:38	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34280	09/12/22 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34144	09/10/22 08:45	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34141	09/10/22 12:37	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	34100	09/09/22 12:23	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34369	09/13/22 14:14	CH	EET MID

Client Sample ID: BH02

Date Collected: 09/07/22 13:30
Date Received: 09/08/22 08:15

Lab Sample ID: 890-2894-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	34678	09/16/22 13:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34891	09/20/22 23:23	MR	EET MID
Total/NA	Analysis	Total BTEX		1			35021	09/21/22 09:38	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Client Sample ID: BH02

Date Collected: 09/07/22 13:30
Date Received: 09/08/22 08:15

Lab Sample ID: 890-2894-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			34280	09/12/22 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34144	09/10/22 08:45	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34141	09/10/22 12:59	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	34100	09/09/22 12:23	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34369	09/13/22 14:18	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: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

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: Saragossa 16 State 2

Job ID: 890-2894-1
SDG: 03A1987017

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2894-1	BH01	Solid	09/07/22 13:00	09/08/22 08:15	0.5
890-2894-2	BH01	Solid	09/07/22 13:10	09/08/22 08:15	1
890-2894-3	BH02	Solid	09/07/22 13:20	09/08/22 08:15	0.5
890-2894-4	BH02	Solid	09/07/22 13:30	09/08/22 08:15	1

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	Ensolum, LLC.	Company Name:	Devon Energy Corporation
Address:	2351 W Northwest Hwy Suite 1203A	Address:	5315 Buena Vista Dr.
City, State ZIP:	Dallas, TX 75220	City, State ZIP:	Carlsbad, NM 88220
Phone:	281-702-2329	Email:	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:	Saragossa 16 state 2	Turn Around	
Project Number:	03A1987017	☑ Routine ☐ Rush	
Project Location:		Due Date:	5 days TAT
Sampler's Name:	Sanju khatri	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	6.2	
Total Containers:		Corrected Temperature:	6.0	

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX - EPA METHOD 8021B	TPH - EPA METHOD 8015M/D	CHLORIDE - EPA METHOD 300.0	Sample Comments
BH01	s	9/7/2022	13:00	0.5'	Grab/	1		x	x	x	2RP-3869
BH01	s	9/7/2022	13:10	1'	Grab/	1		x	x	x	Cost Center: 1061084301
BH02	s	9/7/2022	13:20	0.5'	Grab/	1		x	x	x	
BH02	s	9/7/2022	13:30	1'	Grab/	1		x	x	x	

890-2894 Chain of Custody

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Sanju khatri		9-8-22 8:15			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2894-1
SDG Number: 03A1987017

Login Number: 2894
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2894-1
SDG Number: 03A1987017

Login Number: 2894
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/09/22 11:04 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	

ENSOLUM

APPENDIX G

Email Correspondence

From: Joseph Hernandez
To: ocd.enviro@state.nm.us; "CFO_Spill, BLM_NM"
Cc: Raley, Jim; Devon-Team
Subject: WPX Site Sampling Activity Update (9/6-9/9/22)
Date: Friday, September 2, 2022 5:06:00 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Good afternoon,

WPX anticipates conducting confirmation soil sampling activities at the following sites between September 6 through September 9, 2022:

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

Site: RDX 21-43
API: 30-015-40997
Incident Number: NAB1730640185

Site: Saragossa 16 State 2
API: 30-015-31584
Incident Number: pAB1625253965

Site: Brushy Gathering Facility
Incident Number: nAB1805133508

Site: UCBH WW 3
API: 30-015-24451
Incident Numbers: nAB1702454101

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

Joseph S. Hernandez
Senior Geologist
281-702-2329
Ensolum, LLC

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 176853

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 176853
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAB1625254125 SARAGOSSA 16 STATE #002, thank you. This closure is approved.	5/16/2023