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	NAPP2212344322
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Adrian Baker	Contact Telephone 432-236-3808
Contact email adrian.baker@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 6401 Holiday Hill Rd Bldg 5, Midland, Texas, 79707	

Location of Release Source

Latitude 32.34622 Longitude -103.83548
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit 106	Site Type Flow Line
Date Release Discovered 04/20/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
K	36	22S	30E	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) 5.78	Volume Recovered (bbls) .57
☒ Produced Water	Volume Released (bbls) 9.43	Volume Recovered (bbls) .93
	Is the concentration of total dissolved solids (TDS) 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: External corrosion caused a flowline to release fluids to soil. All free fluids were recovered. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2212344322
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? N/A

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
N/A

Initial Response

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

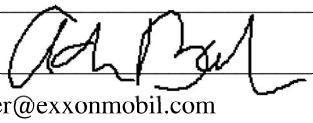
- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have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

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

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: Adrian Baker Title: SSHE Coordinator

Signature:  Date: 5/3/22

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: Jocelyn Harimon Date: 05/03/2022

Location:	James Ranch Unit 106	
Spill Date:	4/20/2022	

Area 1		
Approximate Area =	513.00	sq. ft.
Average Saturation (or depth) of spill =	12.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	5.78	bbls
Total Produced Water =	9.43	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**5.78**	**bbls**
Total Produced Water =	**9.43**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.57**	**bbls**
Total Produced Water =	**0.93**	**bbls**

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 103634
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	5/3/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2212344322
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

Incident ID	NAPP2212344322
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: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature:_____ _____ Date: ____3/30/2023_____

email: _garrett.green@exxonmobil.com_____ Telephone: ____575-200-0729_____

OCD Only

Received by: Jocelyn Harimon Date: 03/30/2023

Incident ID	NAPP2212344322
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: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature: _____ Date: __3/30/2023_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729_____

OCD Only

Received by: Jocelyn Harimon Date: 03/30/2023

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: _____ Date: 04/10/2023

Printed Name: Jocelyn Harimon Title: Environmental Specialist

ENSOLUM

March 30, 2023

New Mexico Oil Conservation Division
New Mexico Energy, Mineral, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
James Ranch Unit 106
Incident Number NAPP2212344322
Eddy County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request* following actions completed after denial of a *Remediation Work Plan* (*RWP*) submitted on October 17, 2020 to the New Mexico Oil Conservation Division (NMOCD). This *Closure Request* details additional remediation activities completed at the James Ranch Unit 106 (Site). In the denial of the *RWP*, NMOCD indicated that the Site was not fully delineated, though additional delineation was proposed as part of the *RWP*. Based on the additional remediation activities described below, XTO is submitting this *Closure Request* and requesting closure for Incident Number NAPP2212344322.

BACKGROUND

The Site is located in Unit K, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.34622° N, 103.83548° W) and is associated with oil and gas exploration and production operations on New Mexico State Land.

On April 20, 2022, corrosion caused a leak to a flowline, which resulted in the release of 5.78 barrels (bbls) of crude oil and 9.43 bbls of produced water off the well pad and into the adjacent pasture where fluids pooled. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 1.50 bbls of crude oil and produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on May 3, 2022. The release was assigned Incident Number NAPP2212344322.

Between May 24, 2022 and July 26, 2022, XTO conducted assessment, delineation, and excavation activities in response to the release. An estimated 30 cubic yards of impacted soil were excavated from the Site. Based on the site assessment activities and laboratory analytical results from the soil sampling events, XTO submitted the *RWP* on October 17, 2022, proposing the following:

- Final vertical delineation of waste-containing soil.
- Treatment of residual waste-containing soil with a biological amendment to support natural attenuation of total petroleum hydrocarbon (TPH) compounds.

- Additional confirmation soil sampling to track the progress of the TPH degradation until soil samples meet the applicable NMOCD Table I Closure Criteria (Closure Criteria).

The *RWP* detailed site characterization to determine application of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the site characterization are presented on page 3 of the Form C-141, Site Assessment/Characterization. Based on the site characterization, the following Closure Criteria were applied:

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

In addition, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture area that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

On January 26, 2023, NMOCD denied the *RWP* for Incident Number NAPP2212344322 for the following reasons: "*Delineation of the release is incomplete.*"

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

XTO operation and safety personnel provided access to excavate the release with mechanical equipment. On March 7 and March 8, 2023, Ensolum personnel returned to the Site to oversee excavation activities in the areas of floor samples FS02/FS02A and FS03/FS03A collected in October 2022 from the original excavation extent. Details of the previous excavation work can be found in the *RWP* submitted October 17, 2022. Impacted soil was excavated from the release area as indicated by visible staining and laboratory analytical results for the original floor soil samples. Excavation activities were performed using a backhoe and transport vehicle. To direct excavation activities, soil was screened for volatile organic compounds (VOCs) and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to a depth of 2 feet bgs. Photographic documentation of the excavation activities is included in Appendix A.

Following removal of the impacted soil, 5-point composite soil samples were collected at least every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite floor samples FS02B and FS03B were collected from the floor of the excavation at a depth of 2 feet bgs. Composite sidewall samples SW01 and SW02 were collected from depths ranging from ground surface to 2 feet bgs. The confirmation 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 under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COC) BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. The excavation extent and excavation soil sample locations are presented on Figure 1.

The excavation area measured approximately 620 square feet. An additional 15 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly

disposed of at the R360 Facility in Carlsbad, New Mexico. A total of approximately 45 cubic yards of impacted soil were removed from the Site.

Laboratory analytical results for confirmation soil samples FS02B, FS03B, SW01 and SW02 indicated all COC concentrations were compliant with the Closure Criteria and applicable reclamation requirement. As such, no further remediation was required. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix B.

CLOSURE REQUEST

Additional excavation and sampling activities were conducted at the Site to address the April 20, 2022, crude oil and produced water release. Laboratory analytical results for the final excavation soil samples indicated that all COC concentrations were compliant with the most stringent Table 1 Closure Criteria. Based on the soil sample analytical results no further remediation is required. XTO will backfill the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The pasture area will be re-seeded with an approved BLM seed mixture.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2212344322.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Tacoma Morrissey, M.S.
Senior Geologist

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

cc: Garrett Green, XTO
Shelby Pennington, XTO
New Mexico State Land Office

Appendices:

Figure 1	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	NMOCD Notifications

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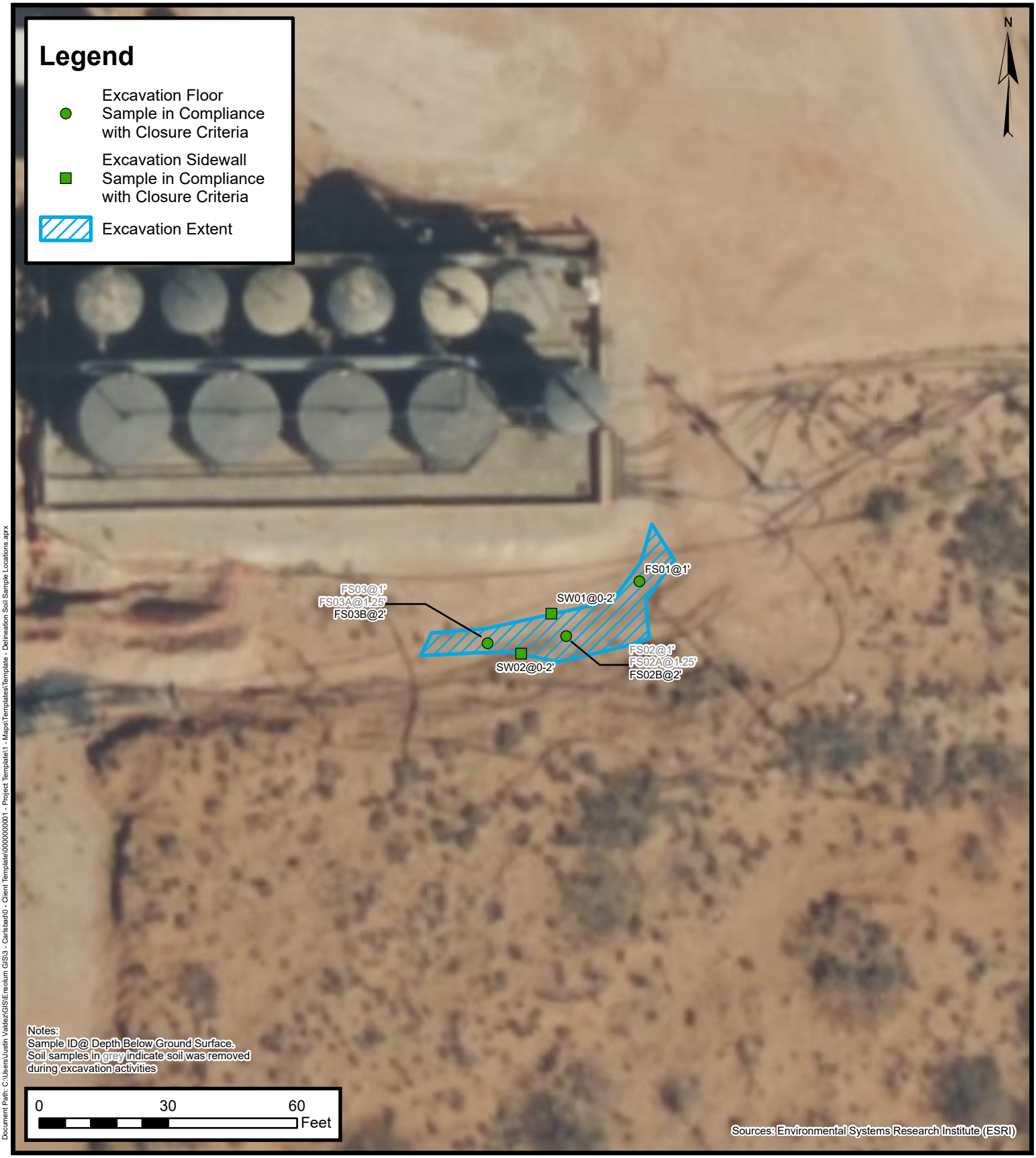
FIGURES



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\0 - Client Template\000000001 - Project Template\1 - Maps\Templates\Template - Delineation Soil Sample Locations.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

James Ranch Unit 106
XTO ENERGY, INC
Incident Number: nAPP2212344322
Unit K Sec 36 T22S R30E
Eddy County, New Mexico

FIGURE
1

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
James Ranch Unit 106
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Excavation Soil Soil Samples										
FS01	07/26/2022	1	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	307
~~FS02~~	~~07/26/2022~~	~~1~~	~~<0.00200~~	~~<0.00401~~	~~<49.9~~	~~960~~	~~266~~	~~<49.9~~	~~**1,230**~~	~~143~~
~~FS02A~~	~~10/06/2022~~	~~1.25~~	~~<0.00200~~	~~<0.00399~~	~~136~~	~~<50.0~~	~~<50.0~~	~~136~~	~~**136**~~	~~230~~
FS02B	03/08/2022	2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	146
~~FS03~~	~~07/26/2022~~	~~1~~	~~<0.00201~~	~~<0.00402~~	~~87.5~~	~~671~~	~~137~~	~~759~~	~~**896**~~	~~173~~
~~FS03A~~	~~10/06/2022~~	~~1.25~~	~~<0.00202~~	~~<0.00404~~	~~975~~	~~<50.0~~	~~205~~	~~975~~	~~**1,180**~~	~~74.6~~
FS03B	03/08/2022	2	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	21.9
SW01	03/08/2022	0-2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	152
SW02	03/08/2022	0-2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	20.0

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
NMAC: New Mexico Administrative Code
~~Grey~~ text indicates soil sample removed during excavation activities

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APPENDIX A

Photographic Log

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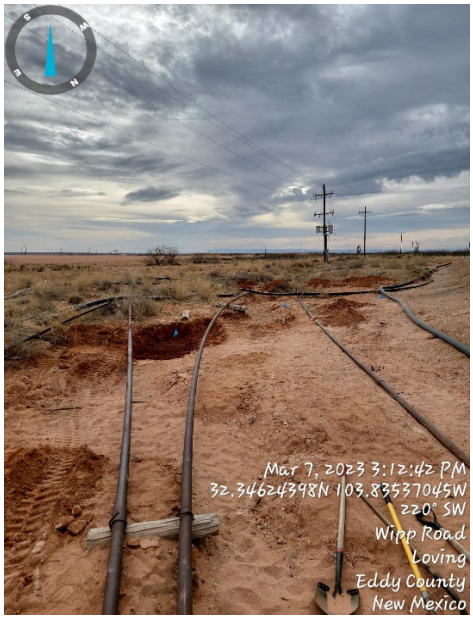
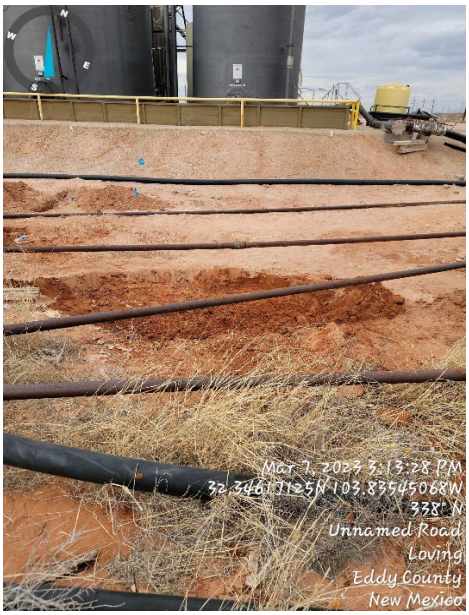
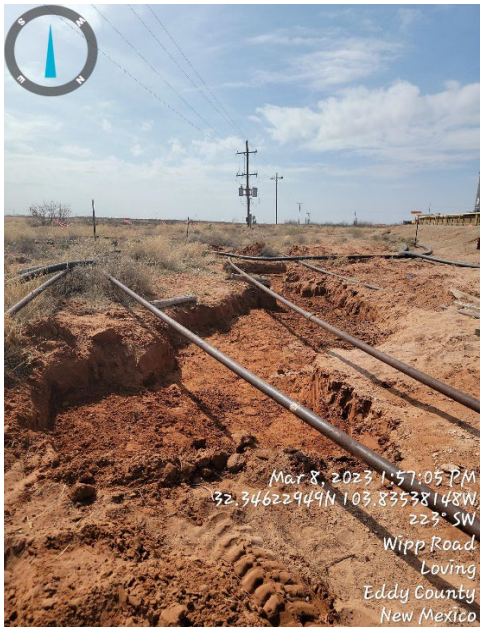
Photographic Log
XTO Energy, Inc.
James Ranch Unit 106
Incident Number NAPP2212344322



Photograph 1
Date: March 7, 2023
Description: Ongoing excavation facing southwest



Photograph 2
Date: March 7, 2023
Description: Ongoing excavation facing north



Photograph 3
Date: March 8, 2023
Description: Final excavation facing southwest

Photograph 4
Date: March 8, 2023
Description: Final excavation facing east

ENSOLUM

APPENDIX B

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 3/20/2023 11:53:05 AM

JOB DESCRIPTION

JRU 106
SDG NUMBER 03C1558047

JOB NUMBER

890-4259-1

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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3/20/2023 11:53:05 AM

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

Client: Ensolum
Project/Site: JRU 106

Laboratory Job ID: 890-4259-1
SDG: 03C1558047

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Qualifiers

GC VOA

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

GC Semi VOA

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

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: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Job ID: 890-4259-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4259-1

Receipt
The samples were received on 3/8/2023 3:06 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS02B (890-4259-1), SW01 (890-4259-2), FS03B (890-4259-3) and SW02 (890-4259-4).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SW02 (890-4259-4). 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-48358 and analytical batch 880-48412 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-48358 and analytical batch 880-48412 was outside control limits. Sample non-homogeneity is suspected.

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 880-48405 and analytical batch 880-48670 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.The associated samples are: FS02B (890-4259-1), SW01 (890-4259-2), FS03B (890-4259-3), SW02 (890-4259-4), (890-4259-A-1-C MS) and (890-4259-A-1-D MSD).

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: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Client Sample ID: FS02B

Lab Sample ID: 890-4259-1
Matrix: Solid
Date Collected: 03/08/23 10:10
Date Received: 03/08/23 15:06
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/16/23 13:03	03/19/23 15:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/16/23 13:03	03/19/23 15:12	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/16/23 13:03	03/19/23 15:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/16/23 13:03	03/19/23 15:12	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/16/23 13:03	03/19/23 15:12	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/16/23 13:03	03/19/23 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*03/16/23 13:03*	*03/19/23 15:12*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/16/23 13:03*	*03/19/23 15:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/20/23 12:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/13/23 17:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/10/23 16:42	03/13/23 01:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/10/23 16:42	03/13/23 01:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/10/23 16:42	03/13/23 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*03/10/23 16:42*	*03/13/23 01:30*	*1*
o-Terphenyl	*114*		*70 - 130*	*03/10/23 16:42*	*03/13/23 01:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**146**	**F1**	5.03		mg/Kg			03/16/23 00:58	1

Client Sample ID: SW01

Lab Sample ID: 890-4259-2
Matrix: Solid
Date Collected: 03/08/23 10:15
Date Received: 03/08/23 15:06
Sample Depth: 0 - 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 15:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 15:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 15:33	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/16/23 13:03	03/19/23 15:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 15:33	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/16/23 13:03	03/19/23 15:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*03/16/23 13:03*	*03/19/23 15:33*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Client Sample ID: SW01

Lab Sample ID: 890-4259-2
Matrix: Solid
Date Collected: 03/08/23 10:15
Date Received: 03/08/23 15:06
Sample Depth: 0 - 2'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*03/16/23 13:03*	*03/19/23 15:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			03/20/23 12:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/13/23 17:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/10/23 16:42	03/13/23 01:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/10/23 16:42	03/13/23 01:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/10/23 16:42	03/13/23 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*03/10/23 16:42*	*03/13/23 01:51*	*1*
o-Terphenyl	*109*		*70 - 130*	*03/10/23 16:42*	*03/13/23 01:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**152**		5.04	mg/Kg			03/16/23 01:13	1

Client Sample ID: FS03B

Lab Sample ID: 890-4259-3
Matrix: Solid
Date Collected: 03/08/23 13:10
Date Received: 03/08/23 15:06
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		03/16/23 13:03	03/19/23 15:53	1
Toluene	<0.00198	U	0.00198	mg/Kg		03/16/23 13:03	03/19/23 15:53	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		03/16/23 13:03	03/19/23 15:53	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		03/16/23 13:03	03/19/23 15:53	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		03/16/23 13:03	03/19/23 15:53	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		03/16/23 13:03	03/19/23 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*03/16/23 13:03*	*03/19/23 15:53*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*03/16/23 13:03*	*03/19/23 15:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			03/20/23 12:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/13/23 17:10	1

Client Sample Results

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Client Sample ID: FS03B

Lab Sample ID: 890-4259-3
Matrix: Solid
Date Collected: 03/08/23 13:10
Date Received: 03/08/23 15:06
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/10/23 16:42	03/13/23 02:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/10/23 16:42	03/13/23 02:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/10/23 16:42	03/13/23 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*03/10/23 16:42*	*03/13/23 02:12*	*1*
o-Terphenyl	*115*		*70 - 130*	*03/10/23 16:42*	*03/13/23 02:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.9**		4.97		mg/Kg			03/16/23 01:17	1

Client Sample ID: SW02

Lab Sample ID: 890-4259-4
Matrix: Solid
Date Collected: 03/08/23 13:30
Date Received: 03/08/23 15:06
Sample Depth: 0 - 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/16/23 13:03	03/19/23 16:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/16/23 13:03	03/19/23 16:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/16/23 13:03	03/19/23 16:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/16/23 13:03	03/19/23 16:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/16/23 13:03	03/19/23 16:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/16/23 13:03	03/19/23 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*03/16/23 13:03*	*03/19/23 16:14*	*1*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*03/16/23 13:03*	*03/19/23 16:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/20/23 12:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/13/23 17:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/10/23 16:42	03/13/23 02:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/10/23 16:42	03/13/23 02:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/10/23 16:42	03/13/23 02:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*03/10/23 16:42*	*03/13/23 02:55*	*1*
o-Terphenyl	*119*		*70 - 130*	*03/10/23 16:42*	*03/13/23 02:55*	*1*

Client Sample Results

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Client Sample ID: SW02

Lab Sample ID: 890-4259-4

Date Collected: 03/08/23 13:30
Matrix: Solid
Date Received: 03/08/23 15:06
Sample Depth: 0 - 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20.0		4.98		mg/Kg			03/16/23 01:22	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

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)
890-4259-1	FS02B	76	93
890-4259-1 MS	FS02B	111	83
890-4259-1 MSD	FS02B	105	104
890-4259-2	SW01	84	72
890-4259-3	FS03B	85	88
890-4259-4	SW02	87	64 S1-
LCS 880-48751/1-A	Lab Control Sample	112	99
LCSD 880-48751/2-A	Lab Control Sample Dup	110	102
MB 880-48751/5-A	Method Blank	72	86

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-25780-A-1-C MS	Matrix Spike	108	124
880-25780-A-1-D MSD	Matrix Spike Duplicate	94	111
890-4259-1	FS02B	91	114
890-4259-2	SW01	90	109
890-4259-3	FS03B	89	115
890-4259-4	SW02	93	119
LCS 880-48358/2-A	Lab Control Sample	86	109
LCSD 880-48358/3-A	Lab Control Sample Dup	90	115
MB 880-48358/1-A	Method Blank	119	151 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-48751/5-A
Matrix: Solid
Analysis Batch: 48915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 48751

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 14:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 14:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 14:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/16/23 13:03	03/19/23 14:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/16/23 13:03	03/19/23 14:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/16/23 13:03	03/19/23 14:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*03/16/23 13:03*	*03/19/23 14:51*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*03/16/23 13:03*	*03/19/23 14:51*	*1*

Lab Sample ID: LCS 880-48751/1-A
Matrix: Solid
Analysis Batch: 48915

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48751

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1076		mg/Kg		108	70 - 130		
Toluene			0.100	0.1074		mg/Kg		107	70 - 130		
Ethylbenzene			0.100	0.1109		mg/Kg		111	70 - 130		
m-Xylene & p-Xylene			0.200	0.2528		mg/Kg		126	70 - 130		
o-Xylene			0.100	0.1240		mg/Kg		124	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-48751/2-A
Matrix: Solid
Analysis Batch: 48915

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48751

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1047		mg/Kg		105	70 - 130	3	35
Toluene			0.100	0.1005		mg/Kg		100	70 - 130	7	35
Ethylbenzene			0.100	0.1054		mg/Kg		105	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2343		mg/Kg		117	70 - 130	8	35
o-Xylene			0.100	0.1146		mg/Kg		115	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-4259-1 MS
Matrix: Solid
Analysis Batch: 48915

Client Sample ID: FS02B
Prep Type: Total/NA
Prep Batch: 48751

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.101	0.1033		mg/Kg		102	70 - 130		
Toluene	<0.00201	U	0.101	0.1049		mg/Kg		104	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

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

Lab Sample ID: 890-4259-1 MS
Matrix: Solid
Analysis Batch: 48915

Client Sample ID: FS02B
Prep Type: Total/NA
Prep Batch: 48751

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.101	0.1086		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.202	0.2384		mg/Kg		118	70 - 130
o-Xylene	<0.00201	U	0.101	0.1161		mg/Kg		115	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: 890-4259-1 MSD
Matrix: Solid
Analysis Batch: 48915

Client Sample ID: FS02B
Prep Type: Total/NA
Prep Batch: 48751

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.1172		mg/Kg		118	70 - 130	13	35
Toluene	<0.00201	U	0.0990	0.1059		mg/Kg		107	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.0990	0.1083		mg/Kg		109	70 - 130	0	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.2330		mg/Kg		118	70 - 130	2	35
o-Xylene	<0.00201	U	0.0990	0.1132		mg/Kg		114	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

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

Lab Sample ID: MB 880-48358/1-A
Matrix: Solid
Analysis Batch: 48412

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 48358

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/10/23 16:42	03/12/23 21:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/10/23 16:42	03/12/23 21:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/10/23 16:42	03/12/23 21:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*03/10/23 16:42*	*03/12/23 21:09*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*03/10/23 16:42*	*03/12/23 21:09*	*1*

Lab Sample ID: LCS 880-48358/2-A
Matrix: Solid
Analysis Batch: 48412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1072		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	1000	933.0		mg/Kg		93	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

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

Lab Sample ID: LCS 880-48358/2-A
Matrix: Solid
Analysis Batch: 48412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48358

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-48358/3-A
Matrix: Solid
Analysis Batch: 48412

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48358

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1091		mg/Kg		109	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	987.5		mg/Kg		99	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: 880-25780-A-1-C MS
Matrix: Solid
Analysis Batch: 48412

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 48358

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 F2	998	1139		mg/Kg		114	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1154		mg/Kg		116	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*124*		*70 - 130*

Lab Sample ID: 880-25780-A-1-D MSD
Matrix: Solid
Analysis Batch: 48412

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 48358

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 F2	999	861.9	F2	mg/Kg		86	70 - 130	28	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1026		mg/Kg		103	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-48405/1-A
Matrix: Solid
Analysis Batch: 48670

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/16/23 00:44	1

Lab Sample ID: LCS 880-48405/2-A
Matrix: Solid
Analysis Batch: 48670

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.3		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-48405/3-A
Matrix: Solid
Analysis Batch: 48670

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	273.7		mg/Kg		109	90 - 110	0	20

Lab Sample ID: 890-4259-1 MS
Matrix: Solid
Analysis Batch: 48670

Client Sample ID: FS02B
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	146	F1	252	289.7	F1	mg/Kg		57	90 - 110		

Lab Sample ID: 890-4259-1 MSD
Matrix: Solid
Analysis Batch: 48670

Client Sample ID: FS02B
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	146	F1	252	290.2	F1	mg/Kg		57	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

GC VOA

Prep Batch: 48751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Total/NA	Solid	5035	
890-4259-2	SW01	Total/NA	Solid	5035	
890-4259-3	FS03B	Total/NA	Solid	5035	
890-4259-4	SW02	Total/NA	Solid	5035	
MB 880-48751/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-48751/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-48751/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4259-1 MS	FS02B	Total/NA	Solid	5035	
890-4259-1 MSD	FS02B	Total/NA	Solid	5035	

Analysis Batch: 48915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Total/NA	Solid	8021B	48751
890-4259-2	SW01	Total/NA	Solid	8021B	48751
890-4259-3	FS03B	Total/NA	Solid	8021B	48751
890-4259-4	SW02	Total/NA	Solid	8021B	48751
MB 880-48751/5-A	Method Blank	Total/NA	Solid	8021B	48751
LCS 880-48751/1-A	Lab Control Sample	Total/NA	Solid	8021B	48751
LCSD 880-48751/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	48751
890-4259-1 MS	FS02B	Total/NA	Solid	8021B	48751
890-4259-1 MSD	FS02B	Total/NA	Solid	8021B	48751

Analysis Batch: 49005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Total/NA	Solid	Total BTEX	
890-4259-2	SW01	Total/NA	Solid	Total BTEX	
890-4259-3	FS03B	Total/NA	Solid	Total BTEX	
890-4259-4	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 48358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Total/NA	Solid	8015NM Prep	
890-4259-2	SW01	Total/NA	Solid	8015NM Prep	
890-4259-3	FS03B	Total/NA	Solid	8015NM Prep	
890-4259-4	SW02	Total/NA	Solid	8015NM Prep	
MB 880-48358/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-48358/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-48358/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-25780-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-25780-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 48412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Total/NA	Solid	8015B NM	48358
890-4259-2	SW01	Total/NA	Solid	8015B NM	48358
890-4259-3	FS03B	Total/NA	Solid	8015B NM	48358
890-4259-4	SW02	Total/NA	Solid	8015B NM	48358
MB 880-48358/1-A	Method Blank	Total/NA	Solid	8015B NM	48358
LCS 880-48358/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	48358

QC Association Summary

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

GC Semi VOA (Continued)

Analysis Batch: 48412 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-48358/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	48358
880-25780-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	48358
880-25780-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	48358

Analysis Batch: 48533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Total/NA	Solid	8015 NM	
890-4259-2	SW01	Total/NA	Solid	8015 NM	
890-4259-3	FS03B	Total/NA	Solid	8015 NM	
890-4259-4	SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 48405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Soluble	Solid	DI Leach	
890-4259-2	SW01	Soluble	Solid	DI Leach	
890-4259-3	FS03B	Soluble	Solid	DI Leach	
890-4259-4	SW02	Soluble	Solid	DI Leach	
MB 880-48405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-48405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-48405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4259-1 MS	FS02B	Soluble	Solid	DI Leach	
890-4259-1 MSD	FS02B	Soluble	Solid	DI Leach	

Analysis Batch: 48670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4259-1	FS02B	Soluble	Solid	300.0	48405
890-4259-2	SW01	Soluble	Solid	300.0	48405
890-4259-3	FS03B	Soluble	Solid	300.0	48405
890-4259-4	SW02	Soluble	Solid	300.0	48405
MB 880-48405/1-A	Method Blank	Soluble	Solid	300.0	48405
LCS 880-48405/2-A	Lab Control Sample	Soluble	Solid	300.0	48405
LCSD 880-48405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	48405
890-4259-1 MS	FS02B	Soluble	Solid	300.0	48405
890-4259-1 MSD	FS02B	Soluble	Solid	300.0	48405

Lab Chronicle

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Client Sample ID: FS02B

Date Collected: 03/08/23 10:10
Date Received: 03/08/23 15:06

Lab Sample ID: 890-4259-1
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	48751	03/16/23 13:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48915	03/19/23 15:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49005	03/20/23 12:33	AJ	EET MID
Total/NA	Analysis	8015 NM		1			48533	03/13/23 17:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	48358	03/10/23 16:42	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	48412	03/13/23 01:30	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	48405	03/11/23 23:25	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	48670	03/16/23 00:58	SMC	EET MID

Client Sample ID: SW01

Date Collected: 03/08/23 10:15
Date Received: 03/08/23 15:06

Lab Sample ID: 890-4259-2
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			4.99 g	5 mL	48751	03/16/23 13:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48915	03/19/23 15:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49005	03/20/23 12:33	AJ	EET MID
Total/NA	Analysis	8015 NM		1			48533	03/13/23 17:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	48358	03/10/23 16:42	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	48412	03/13/23 01:51	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	48405	03/11/23 23:25	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	48670	03/16/23 01:13	SMC	EET MID

Client Sample ID: FS03B

Date Collected: 03/08/23 13:10
Date Received: 03/08/23 15:06

Lab Sample ID: 890-4259-3
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			5.05 g	5 mL	48751	03/16/23 13:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48915	03/19/23 15:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49005	03/20/23 12:33	AJ	EET MID
Total/NA	Analysis	8015 NM		1			48533	03/13/23 17:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	48358	03/10/23 16:42	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	48412	03/13/23 02:12	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	48405	03/11/23 23:25	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	48670	03/16/23 01:17	SMC	EET MID

Client Sample ID: SW02

Date Collected: 03/08/23 13:30
Date Received: 03/08/23 15:06

Lab Sample ID: 890-4259-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	48751	03/16/23 13:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48915	03/19/23 16:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			49005	03/20/23 12:33	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Client Sample ID: SW02

Date Collected: 03/08/23 13:30
Date Received: 03/08/23 15:06

Lab Sample ID: 890-4259-4

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			48533	03/13/23 17:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	48358	03/10/23 16:42	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	48412	03/13/23 02:55	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	48405	03/11/23 23:25	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	48670	03/16/23 01:22	SMC	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: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

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: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

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: JRU 106

Job ID: 890-4259-1
SDG: 03C1558047

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4259-1	FS02B	Solid	03/08/23 10:10	03/08/23 15:06	2'
890-4259-2	SW01	Solid	03/08/23 10:15	03/08/23 15:06	0 - 2'
890-4259-3	FS03B	Solid	03/08/23 13:10	03/08/23 15:06	2'
890-4259-4	SW02	Solid	03/08/23 13:30	03/08/23 15:06	0 - 2'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	5104 E Greene St
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	Carlsbad, NM, 88220
Phone:	989-954-0852	Email:	bbelill@ensolum.com

Work Order Comments

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

Project Name:	JRU 1016	Turn Around	Pres. Code
Project Number:	03C1558047	☑ Routine ☐ Rush	
Project Location:	32.34622, -103.88548	Due Date:	
Sampler's Name:	Julianna Falcomata	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:	IR#007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.2
Total Containers:		Corrected Temperature:	2.0

ANALYSIS REQUEST

Parameters: Chlorides, BTEX, TPH

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	Sample Comments
FS02B	S	3-8-23	1010	2'	C	1	NAPP2212344322
SW01	↓	↓	1015	0-2'	C	1	Lost Hunter:
FS03B			1310	2'	C	1	113898100
SW02			1330	0-2'	C	1	

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	Julianna Falcomata	Cole Cep	3-8-23 1500	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4259-1
SDG Number: 03C1558047

Login Number: 4259
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.	N/A	Look at NCM
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
TCEQ Mtd 1005 soil sample was frozen/delivered for prep within 48H of sampling.	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4259-1
SDG Number: 03C1558047

Login Number: 4259
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 03/10/23 10:53 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	
TCEQ Mtd 1005 soil sample was frozen/delivered for prep within 48H of sampling.	True	

ENSOLUM

APPENDIX C

NMOCD Notifications

From: Harimon, Jocelyn, EMNRD
To: Green, Garrett J; Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Cc: Pennington, Shelby G; Tacoma Morrissey
Subject: RE: [EXTERNAL] XTO-Extension Request – James Ranch Unit 106 – Incident Number nAPP2212344322
Date: Friday, January 6, 2023 5:29:07 PM

[**EXTERNAL EMAIL**]

Hello Garrett,

Your request for a 90-day extension is approved to April 2, 2023 to submit a remediation report. Please include a copy of this and all notifications in the closure report to ensure the notifications are documented in the project file.

Thanks,
Jennifer Nobui

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: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Friday, January 6, 2023 4:08 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
Subject: [EXTERNAL] XTO-Extension Request – James Ranch Unit 106 – Incident Number nAPP2212344322

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

All,

XTO is requesting an extension for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for a release at the James Ranch Unit 106 (Incident Number

NAPP2212344322). The release occurred on April 20, 2022 into the surrounding pasture in an area surrounded by active production lines. Initial assessment of the release was conducted and saturated soil was removed by hand shoveling. Full excavation and delineation via mechanical means was limited due to the presence of active, steel surface and subsurface production lines. Hand shoveling was further restricted by an indurated caliche encountered in the shallow subsurface. A Remediation Work Plan, detailing work completed to date and proposing final delineation activities as well as application of a bioremediation amendment to address residual TPH impacts was submitted on October 17, 2022. The Work Plan was denied by NMOCD on January 6, 2023, because "delineation of the release is incomplete." In order to complete additional remedial activities around active steel infrastructure and evaluate options at the Site for a revised Remediation Work Plan, XTO respectfully requests a 90-day extension. The revised Remediation Work Plan will be submitted no later than April 2, 2023.

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Green, Garrett J
To: Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: RE: XTO - Sampling Notification (Week of 3/6/23 - 3/10/23)
Date: Monday, March 6, 2023 11:24:04 AM

[**EXTERNAL EMAIL**]

All,

We have had an addition to the sampling schedule. See Below.

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Green, Garrett J
Sent: Friday, March 3, 2023 8:21 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>
Subject: XTO - Sampling Notification (Week of 3/6/23 - 3/10/23)

All,

XTO plans to complete final sampling activities at the following site the week of Mar 6, 2023.

- Tiger Compressor Station / nAPP2235638568
- JRU 106 / nAPP2212344322

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit

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 202345

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 202345
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	4/10/2023