State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230548752
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: __01/13/2022_____

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

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: 4/17/2023

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 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	NAPP2230548752
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Garrett Green	Contact Telephone 575-200-0729
Contact email garrett.green@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220	

Location of Release Source

Latitude 32.41971 Longitude -104.08963
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Eddy Unit 158	Site Type Tank Battery
Date Release Discovered 10/19/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
J	04	22S	28E	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)
☒ Produced Water	Volume Released (bbls) 7.00	Volume Recovered (bbls) 7.00
	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: The BEU 158 well unloaded a large volume of fluid and overflowed the water tank when brought back online following a power failure. A vac truck was dispatched and recovered 7bbl produced water from impermeable containment. A 48-hour advance liner inspection notice was sent to NMOCD District 2. Liner was visually inspected and determined not to be operating as designed. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230548752
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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: Garrett Green
Title: SSHE Coordinator
Signature: 
Date: 11/1/2022
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon
Date: 11/01/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230548752
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?	<50 (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	NAPP2230548752
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: ____01/13/2022_____

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

OCD Only

Received by: ____Jocelyn Harimon_____ Date: ___01/17/2023___

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230548752
District RP	
Facility ID	
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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: __01/13/2022_____

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

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: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

January 13, 2023

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Big Eddy Unit 158
Incident Number NAPP2230548752
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc (XTO), has prepared this *Closure Request* to document assessment and soil sampling activities performed at the Big Eddy Unit 158 (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of produced water within lined containment at the Site. Based on field observations, field screening activities, and laboratory analytical results, XTO is submitting this *Closure Request* and requesting closure for Incident Number NAPP2230548752.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 04, Township 22 South, Range 28 East, in Eddy County, New Mexico (32.41971°N, 104.08963°W) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 19, 2022, due to power failure, fluid coming from the well overflowed the produced water tank, releasing 7 barrels (bbls) of produced water into the lined containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 7 bbls of produced water were recovered from the within the lined containment. A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD). A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO submitted a Release Notification Form C-141 (Form C-141) on November 1, 2022. The release was assigned Incident Number NAPP2230548752.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability 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 characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearby groundwater well data. Based on the desktop review, the closest permitted groundwater wells are New Mexico Office of the State Engineer (NMOSE) well C-03843 which involves five

groundwater well locations (POD1 through POD5) surrounding the Site at distances ranging from approximately 63 feet to 475 feet from the Site, however, depth to groundwater was not recorded and Well Records and Logs could not be found. During the field assessment to verify the location of C-03843 well locations, Ensolum verified that the wells do not currently exist in the locations presented. Ensolum conducted a survey within a 1,000-foot radius of the locations and did not identify any water wells.

The next closest permitted well to the Site with depth to groundwater data is United States Geological Survey (USGS) well 322502104054001, located approximately 0.34 miles southwest of the Site and has a recorded depth to groundwater of 30.3 feet bgs and a total depth of 56 feet bgs. Ground surface elevation at the groundwater well location is 3,176 feet above mean sea level (amsl), which is approximately 9 feet higher in elevation than the Site. All wells used to determine depth to groundwater are depicted on Figure 1. The Well Record is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 767 feet north of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Potential site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On November 21, 2022, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141. Ensolum personnel advanced one borehole (BH01) via hand auger at the location of the tear in the liner identified during the liner integrity inspection. Two discrete delineation soil samples (BH01/BH01A) were collected from the borehole at depths of approximately 0.5 feet and 1-foot bgs, respectively. Four lateral surface samples (SS01 through SS04) were collected around the lined containment at a depth of 0.5 feet bgs to confirm the release did not extend outside the lined containment. The containment and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Soil from the delineation boreholes were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Field screening results and observations from the borehole were documented on a lithologic/soil sampling log, which is included as Appendix B. The borehole was backfilled with the soil removed and XTO repaired the tear in the liner. Photographic documentation was conducted during the Site visit. A photographic log is included in Appendix C.

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

following EPA Method 300.0. Soil samples delivered to the laboratory the same day they are collected may not have equilibrated to 6 degrees Celcius required for shipment and long term storage, but are considered to have been received in acceptable condition.

Laboratory analytical results for all delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included as Appendix D.

CLOSURE REQUEST

Following the failed liner integrity inspection at the Site, Ensolum personnel advanced one borehole (BH01) at the location of the tear in the liner to assess for the presence or absence of impacted soil resulting from the October 19, 2022, produced water release within lined containment. Laboratory analytical results for all delineation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria. The release was contained laterally by the lined containment and all released fluids were recovered during initial response activities. The tear in the liner was subsequently repaired. NMOCD notifications are included in Appendix E.

Based on initial response efforts, and soil sample laboratory analytical results compliant with the Closure Criteria directly beneath the tear in the liner, XTO respectfully requests closure for Incident Number NAPP2230548752.

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

Sincerely,
Ensolum, LLC

Benjamin J. Belill
Project Geologist

Ashley L. Ager, M.S., PG
Program Director

cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Sample Notification

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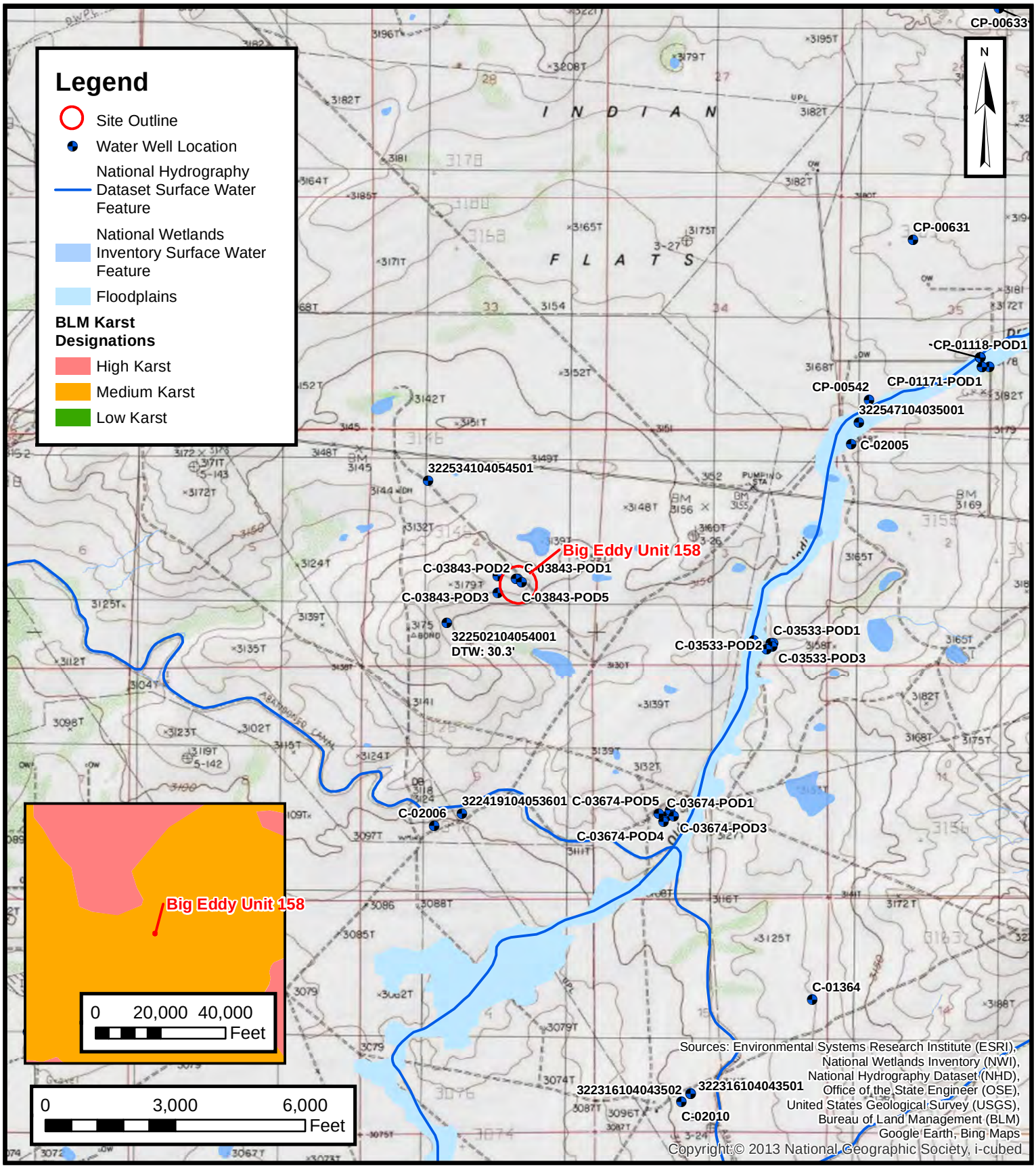
FIGURES

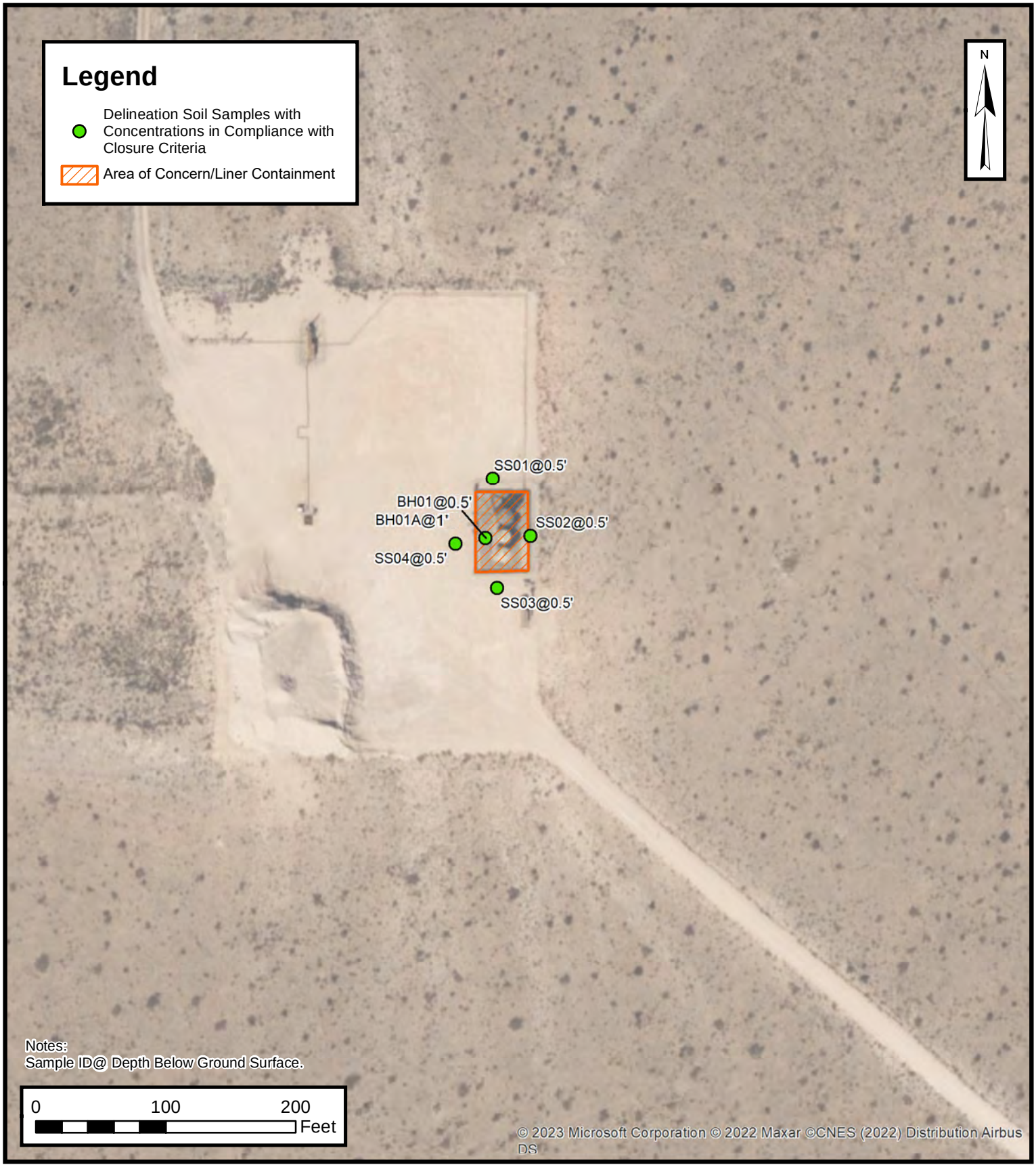


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Big Eddy Unit 158
NAPP2230548752
Unit J, Sec 04, T22S, R28E
Eddy County, New Mexico

FIGURE
1



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
Big Eddy Unit 158
NAPP2230548752
Unit J, Sec 04, T22S, R28E
Eddy County, New Mexico

FIGURE

2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
BIG EDDY UNIT 158
XTO ENERGY, INC
EDDY COUNTY, NM

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	NE	100	600
Delineation Soil Samples										
SS01	11/21/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	121
SS02	11/21/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	51.6	<50.0	51.6	32.3
SS03	11/21/2022	0.5	<0.00200	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	133
SS04	11/21/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	134
BH01	11/21/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	61.4
BH01A	11/21/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	87.3

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
NMAC: New Mexico Administrative Code

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APPENDIX A

Referenced Well Records

Click to hideNews Bulletins

- **ALERT!** USGS will be performing an upgrade to their network on **Thursday, November 17, 2022, starting at 10:00pm EST**. During the maintenance period, the Water Data for the Nation web portal and water services will be accessible; however, delivery of the most recent time-series data and WaterAlert notifications will be disrupted. The maintenance period is not expected to exceed 4 hours, after which the backlog of time-series data will be processed and delivered.
- Water Data for the Nation Blog

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322502104054001

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 322502104054001 21S.28E.04.322211

Eddy County, New Mexico
Latitude 32°25'02", Longitude 104°05'40" NAD27
Land-surface elevation 3,176.00 feet above NGVD29
The depth of the well is 56.0 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Forty-Niner Member of Rustler Formation (310FRNR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1988-03-18		D	62610		3145.62	NGVD29	1	S		
1988-03-18		D	62611		3147.21	NAVD88	1	S		
1988-03-18		D	72019	30.38			1	S		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static

Section	Code	Description
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-11-18 17:26:10 EST
0.28 0.24 nadww02

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APPENDIX B

Lithologic Soil Sampling Logs

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	Sample Name: BH01	Date: 11/21/2022
	Site Name: Big Eddy Unit 158	
	Incident Number: NAPP2230548752	
	Job Number: 03E1558143	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CB	Method: Hand Auger
Coordinates: 32.41971, -104.08963	Hole Diameter: 4"	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.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE (fill)	0-1', CALICHE w/ fine sand, dry, tan, some small sub-round gravel, no stain, no odor, fill.
D	<156.8	0.0	N	BH01	0.5			
D	<156.8	0.1	N	BH01A	1	1		
							TD	Total Depth at 1' bgs.

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APPENDIX C

Photographic Log

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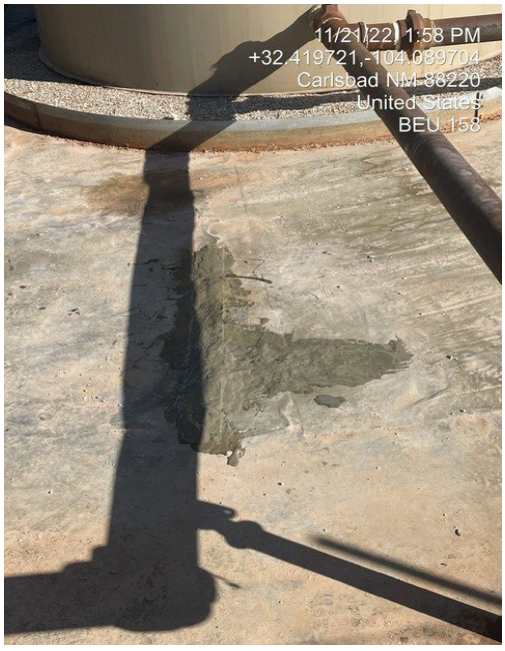
Photographic Log
XTO Energy, Inc
Big Eddy Unit 158
Incident Number NAPP2230548752

Photograph 1 Date: Nov. 21, 2022
Description: Tank battery/containment area.
Direction: Northeast

Photograph 2 Date: Nov. 21, 2022
Description: Liner tear in containment area.
Direction: East

Photograph 3 Date: Nov. 21, 2022
Description: Delineation activities, BH01.
Direction: South



Photograph 4 Date: Nov. 21, 2022
Description: Liner patch, BH01.
Direction: East

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APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

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ANALYTICAL REPORT

PREPARED FOR

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Generated 12/2/2022 11:58:48 AM

JOB DESCRIPTION

BEU 158
SDG NUMBER Eddy County

JOB NUMBER

890-3547-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

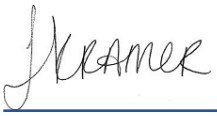
my EOL

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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Authorized for release by
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Client: Ensolum
Project/Site: BEU 158

Laboratory Job ID: 890-3547-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low 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: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Job ID: 890-3547-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3547-1

Receipt
The samples were received on 11/22/2022 1:47 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01A (890-3547-1), BH01 (890-3547-2), SS01 (890-3547-3), SS02 (890-3547-4), SS03 (890-3547-5) and SS04 (890-3547-6).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-40562 and analytical batch 880-40733 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.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-40562 and analytical batch 880-40733 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-21875-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3543-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BH01A (890-3547-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40352 and analytical batch 880-40348 was outside the upper control limits.

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

HPLC/IC
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: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Client Sample ID: BH01A

Lab Sample ID: 890-3547-1
Matrix: Solid
Date Collected: 11/21/22 11:00
Date Received: 11/22/22 13:47
Sample Depth: 0.5'

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		11/29/22 09:30	12/01/22 17:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 17:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 17:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/29/22 09:30	12/01/22 17:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 17:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/29/22 09:30	12/01/22 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*11/29/22 09:30*	*12/01/22 17:45*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/29/22 09:30*	*12/01/22 17:45*	*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			12/02/22 11:58	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			11/28/22 08:46	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		11/24/22 11:08	11/24/22 16:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/24/22 11:08	11/24/22 16:01	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/24/22 11:08	11/24/22 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*11/24/22 11:08*	*11/24/22 16:01*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*11/24/22 11:08*	*11/24/22 16:01*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**87.3**		4.99		mg/Kg			11/30/22 03:59	1

Client Sample ID: BH01

Lab Sample ID: 890-3547-2
Matrix: Solid
Date Collected: 11/21/22 11:50
Date Received: 11/22/22 13:47
Sample Depth: 1'

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		11/29/22 09:30	12/01/22 18:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 18:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 18:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/29/22 09:30	12/01/22 18:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 18:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/29/22 09:30	12/01/22 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*11/29/22 09:30*	*12/01/22 18:05*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Client Sample ID: BH01

Date Collected: 11/21/22 11:50
Date Received: 11/22/22 13:47
Sample Depth: 1'

Lab Sample ID: 890-3547-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/29/22 09:30*	*12/01/22 18:05*	*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			12/02/22 11:58	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			11/28/22 08:46	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		11/24/22 11:08	11/24/22 16:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/24/22 11:08	11/24/22 16:23	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/24/22 11:08	11/24/22 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*11/24/22 11:08*	*11/24/22 16:23*	*1*
o-Terphenyl	*127*		*70 - 130*	*11/24/22 11:08*	*11/24/22 16:23*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**61.4**		4.95		mg/Kg			11/30/22 04:19	1

Surrogate Summary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21875-A-1-D MS	Matrix Spike	85	100
880-21875-A-1-E MSD	Matrix Spike Duplicate	67 S1-	100
890-3547-1	BH01A	75	102
890-3547-2	BH01	81	100
LCS 880-40562/1-A	Lab Control Sample	86	107
LCSD 880-40562/2-A	Lab Control Sample Dup	86	112
MB 880-40562/5-A	Method Blank	68 S1-	100

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)
890-3543-A-1-B MS	Matrix Spike	121	120
890-3543-A-1-C MSD	Matrix Spike Duplicate	135 S1+	135 S1+
890-3547-1	BH01A	123	139 S1+
890-3547-2	BH01	112	127
LCS 880-40352/2-A	Lab Control Sample	85	95
LCSD 880-40352/3-A	Lab Control Sample Dup	81	88
MB 880-40352/1-A	Method Blank	128	146 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40562/5-A
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40562

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/29/22 09:30	12/01/22 11:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*11/29/22 09:30*	*12/01/22 11:01*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/29/22 09:30*	*12/01/22 11:01*	*1*

Lab Sample ID: LCS 880-40562/1-A
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40562

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07329		mg/Kg		73	70 - 130		
Toluene			0.100	0.1078		mg/Kg		108	70 - 130		
Ethylbenzene			0.100	0.1060		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.1907		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.09023		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-40562/2-A
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40562

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1031		mg/Kg		103	70 - 130	34	35
Toluene			0.100	0.1128		mg/Kg		113	70 - 130	5	35
Ethylbenzene			0.100	0.1090		mg/Kg		109	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1878		mg/Kg		94	70 - 130	2	35
o-Xylene			0.100	0.09007		mg/Kg		90	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-21875-A-1-D MS
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.0996	0.06087	F1	mg/Kg		61	70 - 130		
Toluene	<0.00201	U F1	0.0996	0.08141		mg/Kg		82	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

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

Lab Sample ID: 880-21875-A-1-D MS
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.0996	0.07288		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1249	F1	mg/Kg		63	70 - 130
o-Xylene	<0.00201	U F2 F1	0.0996	0.06162	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-21875-A-1-E MSD
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40562

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0990	0.05904	F1	mg/Kg		60	70 - 130	3	35
Toluene	<0.00201	U F1	0.0990	0.06490	F1	mg/Kg		66	70 - 130	23	35
Ethylbenzene	<0.00201	U F1	0.0990	0.05279	F1	mg/Kg		53	70 - 130	32	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.08810	F1	mg/Kg		44	70 - 130	35	35
o-Xylene	<0.00201	U F2 F1	0.0990	0.04273	F2 F1	mg/Kg		43	70 - 130	36	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-40352/1-A
Matrix: Solid
Analysis Batch: 40348

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40352

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		11/24/22 08:48	11/24/22 08:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/24/22 08:48	11/24/22 08:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/24/22 08:48	11/24/22 08:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*11/24/22 08:48*	*11/24/22 08:54*	*1*
o-Terphenyl	*146*	*S1+*	*70 - 130*	*11/24/22 08:48*	*11/24/22 08:54*	*1*

Lab Sample ID: LCS 880-40352/2-A
Matrix: Solid
Analysis Batch: 40348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40352

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	965.7		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	867.1		mg/Kg		87	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

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

Lab Sample ID: LCS 880-40352/2-A
Matrix: Solid
Analysis Batch: 40348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40352

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: LCSD 880-40352/3-A
Matrix: Solid
Analysis Batch: 40348

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40352

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1062		mg/Kg		106	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	948.8		mg/Kg		95	70 - 130	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-3543-A-1-B MS
Matrix: Solid
Analysis Batch: 40348

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40352

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1165		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)	263		999	1325		mg/Kg		106	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	120		70 - 130

Lab Sample ID: 890-3543-A-1-C MSD
Matrix: Solid
Analysis Batch: 40348

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40352

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1299		mg/Kg		128	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	263		997	1505		mg/Kg		125	70 - 130	13	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	135	S1+	70 - 130
o-Terphenyl	135	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40391/1-A
Matrix: Solid
Analysis Batch: 40642

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			11/30/22 03:39	1

Lab Sample ID: LCS 880-40391/2-A
Matrix: Solid
Analysis Batch: 40642

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	271.6		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-40391/3-A
Matrix: Solid
Analysis Batch: 40642

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	272.8		mg/Kg		109	90 - 110	0	20

Lab Sample ID: 890-3547-1 MS
Matrix: Solid
Analysis Batch: 40642

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	87.3		250	357.2		mg/Kg		108	90 - 110		

Lab Sample ID: 890-3547-1 MSD
Matrix: Solid
Analysis Batch: 40642

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	87.3		250	357.0		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

GC VOA

Prep Batch: 40562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Total/NA	Solid	5035	
890-3547-2	BH01	Total/NA	Solid	5035	
MB 880-40562/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40562/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40562/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21875-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-21875-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Total/NA	Solid	8021B	40562
890-3547-2	BH01	Total/NA	Solid	8021B	40562
MB 880-40562/5-A	Method Blank	Total/NA	Solid	8021B	40562
LCS 880-40562/1-A	Lab Control Sample	Total/NA	Solid	8021B	40562
LCSD 880-40562/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40562
880-21875-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	40562
880-21875-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40562

Analysis Batch: 40879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Total/NA	Solid	Total BTEX	
890-3547-2	BH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Total/NA	Solid	8015B NM	40352
890-3547-2	BH01	Total/NA	Solid	8015B NM	40352
MB 880-40352/1-A	Method Blank	Total/NA	Solid	8015B NM	40352
LCS 880-40352/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40352
LCSD 880-40352/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40352
890-3543-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	40352
890-3543-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40352

Prep Batch: 40352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Total/NA	Solid	8015NM Prep	
890-3547-2	BH01	Total/NA	Solid	8015NM Prep	
MB 880-40352/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40352/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40352/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3543-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3543-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Total/NA	Solid	8015 NM	
890-3547-2	BH01	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

HPLC/IC

Leach Batch: 40391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Soluble	Solid	DI Leach	
890-3547-2	BH01	Soluble	Solid	DI Leach	
MB 880-40391/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40391/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40391/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3547-1 MS	BH01A	Soluble	Solid	DI Leach	
890-3547-1 MSD	BH01A	Soluble	Solid	DI Leach	

Analysis Batch: 40642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-1	BH01A	Soluble	Solid	300.0	40391
890-3547-2	BH01	Soluble	Solid	300.0	40391
MB 880-40391/1-A	Method Blank	Soluble	Solid	300.0	40391
LCS 880-40391/2-A	Lab Control Sample	Soluble	Solid	300.0	40391
LCSD 880-40391/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40391
890-3547-1 MS	BH01A	Soluble	Solid	300.0	40391
890-3547-1 MSD	BH01A	Soluble	Solid	300.0	40391

Lab Chronicle

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Client Sample ID: BH01A
Date Collected: 11/21/22 11:00
Date Received: 11/22/22 13:47

Lab Sample ID: 890-3547-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40562	11/29/22 09:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40733	12/01/22 17:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40879	12/02/22 11:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			40378	11/28/22 08:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40352	11/24/22 11:08	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40348	11/24/22 16:01	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	40391	11/28/22 09:13	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40642	11/30/22 03:59	SMC	EET MID

Client Sample ID: BH01
Date Collected: 11/21/22 11:50
Date Received: 11/22/22 13:47

Lab Sample ID: 890-3547-2
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			5.03 g	5 mL	40562	11/29/22 09:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40733	12/01/22 18:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40879	12/02/22 11:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			40378	11/28/22 08:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	40352	11/24/22 11:08	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40348	11/24/22 16:23	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	40391	11/28/22 09:13	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40642	11/30/22 04:19	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: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

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: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

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: BEU 158

Job ID: 890-3547-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3547-1	BH01A	Solid	11/21/22 11:00	11/22/22 13:47	0.5'
890-3547-2	BH01	Solid	11/21/22 11:50	11/22/22 13:47	1'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page ____1__ of ___1___

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	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:	BEU 158	**Turn Around**	
Project Number:	03E1558143	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Chris Brown	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:	THM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Sample Comments
BH01	S	11/21/2022	1100	0.5'	Grab/	1	X	X	X	Cost Center: 1138501001
BH01A	S	11/21/2022	1150	1'	Grab/	1	X	X	X	
										Incident Number: Napp2230548752

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Jessica Kramer	11/22/22 1347	2		
3			4		
5			6		

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-1041 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-3547-1
Address: 1211 W Florida Ave ,	Due Date Requested: 11/30/2022			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: BEU 158	Project #: 89000094			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C - Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BH01A (890-3547-1)	11/21/22	11 00 Mountain		Solid			X	X	X	X	X	1	
BH01 (890-3547-2)	11/21/22	11 50 Mountain		Solid			X	X	X	X	X	1	
SS01 NORTH (890-3547-3)	11/21/22	12 20 Mountain		Solid			X	X	X	X	X	1	
SS02 EAST (890-3547-4)	11/21/22	12 30 Mountain		Solid			X	X	X	X	X	1	
SS03 SOUTH (890-3547-5)	11/21/22	12 40 Mountain		Solid			X	X	X	X	X	1	
SS04 WEST (890-3547-6)	11/21/22	12 50 Mountain		Solid			X	X	X	X	X	1	

Note. Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements
Empty Kit Relinquished by	Date / Time / Method of Shipment:

Relinquished by: Chee	Date/Time:	Company	Received by: Kramer	Date/Time: 11/23 1134	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company	

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3547-1
SDG Number: Eddy County

Login Number: 3547
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3547-1
SDG Number: Eddy County

Login Number: 3547
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 11/23/22 11:54 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/5/2022 2:13:07 PM

JOB DESCRIPTION

BEU 158
SDG NUMBER Eddy County

JOB NUMBER

890-3547-2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

Eurofins Carlsbad

Job Notes

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

Authorization

Generated
12/5/2022 2:13:07 PM

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

Client: Ensolum
Project/Site: BEU 158

Laboratory Job ID: 890-3547-2
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low 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: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Job ID: 890-3547-2

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3547-2

Receipt
The samples were received on 11/22/2022 1:47 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01A (890-3547-1), BH01 (890-3547-2), SS01 (890-3547-3), SS02 (890-3547-4), SS03 (890-3547-5) and SS04 (890-3547-6).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-40562 and analytical batch 880-40733 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.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-40562 and analytical batch 880-40733 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS03 (890-3547-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-21875-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS01 (890-3547-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Client Sample ID: SS01

Date Collected: 11/21/22 12:20
Date Received: 11/22/22 13:47
Sample Depth: 0.5

Lab Sample ID: 890-3547-3
Matrix: Solid

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		11/29/22 09:30	12/01/22 18:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 18:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 18:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/29/22 09:30	12/01/22 18:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 18:26	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/29/22 09:30	12/01/22 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*11/29/22 09:30*	*12/01/22 18:26*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*11/29/22 09:30*	*12/01/22 18:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/02/22 11:58	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			11/28/22 08:46	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		11/24/22 11:08	11/24/22 16:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/24/22 11:08	11/24/22 16:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/24/22 11:08	11/24/22 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*11/24/22 11:08*	*11/24/22 16:45*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*11/24/22 11:08*	*11/24/22 16:45*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**121**		4.97		mg/Kg			11/30/22 04:26	1

Client Sample ID: SS02

Date Collected: 11/21/22 12:30
Date Received: 11/22/22 13:47
Sample Depth: 0.5

Lab Sample ID: 890-3547-4
Matrix: Solid

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		11/29/22 09:30	12/01/22 18:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 18:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 18:46	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/29/22 09:30	12/01/22 18:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 18:46	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/29/22 09:30	12/01/22 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*11/29/22 09:30*	*12/01/22 18:46*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Client Sample ID: SS02

Lab Sample ID: 890-3547-4
Matrix: Solid
Date Collected: 11/21/22 12:30
Date Received: 11/22/22 13:47
Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*11/29/22 09:30*	*12/01/22 18:46*	*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			12/02/22 11:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**51.6**		50.0	mg/Kg			11/28/22 08:46	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		11/24/22 11:08	11/24/22 17:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/24/22 11:08	11/24/22 17:05	1
Oil Range Organics (Over C28-C36)	**51.6**		50.0	mg/Kg		11/24/22 11:08	11/24/22 17:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*109*		*70 - 130*	*11/24/22 11:08*	*11/24/22 17:05*	*1*
o-Terphenyl	*121*		*70 - 130*	*11/24/22 11:08*	*11/24/22 17:05*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.3**		5.05	mg/Kg			11/30/22 04:32	1

Client Sample ID: SS03

Lab Sample ID: 890-3547-5
Matrix: Solid
Date Collected: 11/21/22 12:40
Date Received: 11/22/22 13:47
Sample Depth: 0.5

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		11/29/22 09:30	12/01/22 19:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/29/22 09:30	12/01/22 19:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/29/22 09:30	12/01/22 19:06	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/29/22 09:30	12/01/22 19:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/29/22 09:30	12/01/22 19:06	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/29/22 09:30	12/01/22 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*43*	*S1-*	*70 - 130*	*11/29/22 09:30*	*12/01/22 19:06*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/29/22 09:30*	*12/01/22 19:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			12/02/22 11:58	1

Client Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Client Sample ID: SS03

Lab Sample ID: 890-3547-5
Matrix: Solid
Date Collected: 11/21/22 12:40
Date Received: 11/22/22 13:47
Sample Depth: 0.5

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			11/28/22 08:46	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		11/24/22 11:08	11/24/22 17:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/24/22 11:08	11/24/22 17:27	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/24/22 11:08	11/24/22 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*11/24/22 11:08*	*11/24/22 17:27*	*1*
o-Terphenyl	*119*		*70 - 130*	*11/24/22 11:08*	*11/24/22 17:27*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**133**		4.98		mg/Kg			11/30/22 04:39	1

Client Sample ID: SS04

Lab Sample ID: 890-3547-6
Matrix: Solid
Date Collected: 11/21/22 12:50
Date Received: 11/22/22 13:47
Sample Depth: 0.5

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		11/29/22 09:30	12/01/22 19:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 19:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 19:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/29/22 09:30	12/01/22 19:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/29/22 09:30	12/01/22 19:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/29/22 09:30	12/01/22 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*11/29/22 09:30*	*12/01/22 19:27*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*11/29/22 09:30*	*12/01/22 19:27*	*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			12/02/22 11:58	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			11/28/22 08:46	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		11/24/22 11:08	11/24/22 17:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/24/22 11:08	11/24/22 17:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/24/22 11:08	11/24/22 17:48	1

Client Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Client Sample ID: SS04

Date Collected: 11/21/22 12:50
Date Received: 11/22/22 13:47
Sample Depth: 0.5

Lab Sample ID: 890-3547-6

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	11/24/22 11:08	11/24/22 17:48	1
o-Terphenyl	127		70 - 130	11/24/22 11:08	11/24/22 17:48	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	134		5.00		mg/Kg			11/30/22 04:59	1

Surrogate Summary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-21875-A-1-D MS	Matrix Spike	85	100
880-21875-A-1-E MSD	Matrix Spike Duplicate	67 S1-	100
890-3547-3	SS01	70	106
890-3547-4	SS02	85	112
890-3547-5	SS03	43 S1-	98
890-3547-6	SS04	81	111
LCS 880-40562/1-A	Lab Control Sample	86	107
LCSD 880-40562/2-A	Lab Control Sample Dup	86	112
MB 880-40562/5-A	Method Blank	68 S1-	100

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)
890-3547-3	SS01	122	135 S1+
890-3547-4	SS02	109	121
890-3547-5	SS03	106	119
890-3547-6	SS04	114	127

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40562/5-A
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40562

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/29/22 09:30	12/01/22 11:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/29/22 09:30	12/01/22 11:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*11/29/22 09:30*	*12/01/22 11:01*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/29/22 09:30*	*12/01/22 11:01*	*1*

Lab Sample ID: LCS 880-40562/1-A
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40562

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07329		mg/Kg		73	70 - 130		
Toluene			0.100	0.1078		mg/Kg		108	70 - 130		
Ethylbenzene			0.100	0.1060		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.1907		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.09023		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-40562/2-A
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40562

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1031		mg/Kg		103	70 - 130	34	35
Toluene			0.100	0.1128		mg/Kg		113	70 - 130	5	35
Ethylbenzene			0.100	0.1090		mg/Kg		109	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1878		mg/Kg		94	70 - 130	2	35
o-Xylene			0.100	0.09007		mg/Kg		90	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-21875-A-1-D MS
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.0996	0.06087	F1	mg/Kg		61	70 - 130		
Toluene	<0.00201	U F1	0.0996	0.08141		mg/Kg		82	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

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

Lab Sample ID: 880-21875-A-1-D MS
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.0996	0.07288		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1249	F1	mg/Kg		63	70 - 130
o-Xylene	<0.00201	U F2 F1	0.0996	0.06162	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-21875-A-1-E MSD
Matrix: Solid
Analysis Batch: 40733

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40562

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0990	0.05904	F1	mg/Kg		60	70 - 130	3	35
Toluene	<0.00201	U F1	0.0990	0.06490	F1	mg/Kg		66	70 - 130	23	35
Ethylbenzene	<0.00201	U F1	0.0990	0.05279	F1	mg/Kg		53	70 - 130	32	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.08810	F1	mg/Kg		44	70 - 130	35	35
o-Xylene	<0.00201	U F2 F1	0.0990	0.04273	F2 F1	mg/Kg		43	70 - 130	36	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40391/1-A
Matrix: Solid
Analysis Batch: 40642

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			11/30/22 03:39	1

Lab Sample ID: LCS 880-40391/2-A
Matrix: Solid
Analysis Batch: 40642

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	271.6		mg/Kg		109	90 - 110

Lab Sample ID: LCSD 880-40391/3-A
Matrix: Solid
Analysis Batch: 40642

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	272.8		mg/Kg		109	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-3547-A-1-C MS
Matrix: Solid
Analysis Batch: 40642

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	87.3		250	357.2		mg/Kg		108	90 - 110

Lab Sample ID: 890-3547-A-1-D MSD
Matrix: Solid
Analysis Batch: 40642

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	87.3		250	357.0		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

GC VOA

Prep Batch: 40562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Total/NA	Solid	5035	
890-3547-4	SS02	Total/NA	Solid	5035	
890-3547-5	SS03	Total/NA	Solid	5035	
890-3547-6	SS04	Total/NA	Solid	5035	
MB 880-40562/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40562/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40562/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21875-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-21875-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Total/NA	Solid	8021B	40562
890-3547-4	SS02	Total/NA	Solid	8021B	40562
890-3547-5	SS03	Total/NA	Solid	8021B	40562
890-3547-6	SS04	Total/NA	Solid	8021B	40562
MB 880-40562/5-A	Method Blank	Total/NA	Solid	8021B	40562
LCS 880-40562/1-A	Lab Control Sample	Total/NA	Solid	8021B	40562
LCSD 880-40562/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40562
880-21875-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	40562
880-21875-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40562

Analysis Batch: 40880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Total/NA	Solid	Total BTEX	
890-3547-4	SS02	Total/NA	Solid	Total BTEX	
890-3547-5	SS03	Total/NA	Solid	Total BTEX	
890-3547-6	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Total/NA	Solid	8015B NM	40352
890-3547-4	SS02	Total/NA	Solid	8015B NM	40352
890-3547-5	SS03	Total/NA	Solid	8015B NM	40352
890-3547-6	SS04	Total/NA	Solid	8015B NM	40352

Prep Batch: 40352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Total/NA	Solid	8015NM Prep	
890-3547-4	SS02	Total/NA	Solid	8015NM Prep	
890-3547-5	SS03	Total/NA	Solid	8015NM Prep	
890-3547-6	SS04	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Total/NA	Solid	8015 NM	
890-3547-4	SS02	Total/NA	Solid	8015 NM	
890-3547-5	SS03	Total/NA	Solid	8015 NM	
890-3547-6	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

HPLC/IC

Leach Batch: 40391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Soluble	Solid	DI Leach	
890-3547-4	SS02	Soluble	Solid	DI Leach	
890-3547-5	SS03	Soluble	Solid	DI Leach	
890-3547-6	SS04	Soluble	Solid	DI Leach	
MB 880-40391/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40391/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40391/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3547-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3547-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3547-3	SS01	Soluble	Solid	300.0	40391
890-3547-4	SS02	Soluble	Solid	300.0	40391
890-3547-5	SS03	Soluble	Solid	300.0	40391
890-3547-6	SS04	Soluble	Solid	300.0	40391
MB 880-40391/1-A	Method Blank	Soluble	Solid	300.0	40391
LCS 880-40391/2-A	Lab Control Sample	Soluble	Solid	300.0	40391
LCSD 880-40391/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40391
890-3547-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	40391
890-3547-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40391

Lab Chronicle

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Client Sample ID: SS01

Lab Sample ID: 890-3547-3

Date Collected: 11/21/22 12:20
Matrix: Solid
Date Received: 11/22/22 13:47

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	40562	11/29/22 09:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40733	12/01/22 18:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40880	12/02/22 11:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			40378	11/28/22 08:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	40352	11/24/22 11:08	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40348	11/24/22 16:45	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	40391	11/28/22 09:13	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40642	11/30/22 04:26	SMC	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-3547-4

Date Collected: 11/21/22 12:30
Matrix: Solid
Date Received: 11/22/22 13:47

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	40562	11/29/22 09:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40733	12/01/22 18:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40880	12/02/22 11:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			40378	11/28/22 08:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	40352	11/24/22 11:08	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40348	11/24/22 17:05	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	40391	11/28/22 09:13	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40642	11/30/22 04:32	SMC	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-3547-5

Date Collected: 11/21/22 12:40
Matrix: Solid
Date Received: 11/22/22 13:47

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	40562	11/29/22 09:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40733	12/01/22 19:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40880	12/02/22 11:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			40378	11/28/22 08:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40352	11/24/22 11:08	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40348	11/24/22 17:27	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40391	11/28/22 09:13	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40642	11/30/22 04:39	SMC	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-3547-6

Date Collected: 11/21/22 12:50
Matrix: Solid
Date Received: 11/22/22 13:47

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	40562	11/29/22 09:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40733	12/01/22 19:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40880	12/02/22 11:58	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Client Sample ID: SS04

Date Collected: 11/21/22 12:50
Date Received: 11/22/22 13:47

Lab Sample ID: 890-3547-6

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			40378	11/28/22 08:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40352	11/24/22 11:08	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40348	11/24/22 17:48	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40391	11/28/22 09:13	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40642	11/30/22 04:59	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: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

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: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

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: BEU 158

Job ID: 890-3547-2
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3547-3	SS01	Solid	11/21/22 12:20	11/22/22 13:47	0.5
890-3547-4	SS02	Solid	11/21/22 12:30	11/22/22 13:47	0.5
890-3547-5	SS03	Solid	11/21/22 12:40	11/22/22 13:47	0.5
890-3547-6	SS04	Solid	11/21/22 12:50	11/22/22 13:47	0.5

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:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc.
Address:	3122 National parks Hwy	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	9898540852	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:	BEU 158	**Turn Around**	
Project Number:	03E1558143	☑ Routine ☐ Rush	
Project Location:	EDDY COUNTY, NM	Due Date:	
Sampler's Name:	Chris Brown	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:	THM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021	Sample Comments
SS01	S	11/21/2022	1220	0.5'	Grab/	1	X	X	X	Cost Center: 1138501001
SS02	S	11/21/2022	1230	0.5'	Grab/	1	X	X	X	
SS03	S	11/21/2022	1240	0.5'	Grab/	1	X	X	X	
SS04	S	11/21/2022	1250	0.5'	Grab/	1	X	X	X	
										Incident Number: Napp2230548752

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Ben Belill	Jessica Kramer	11/22/22 1347	2		
3			4		
5			6		

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3547-2
SDG Number: Eddy County

Login Number: 3547
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3547-2
SDG Number: Eddy County

Login Number: 3547
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 11/23/22 11:54 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Green, Garrett J
To: Tacoma Morrissey
Subject: FW: XTO - Sampling Notification (Week of 11/21/22 - 11/25/22)
Date: Friday, November 18, 2022 3:38:40 PM

[**EXTERNAL EMAIL**]

From: Green, Garrett J
Sent: Friday, November 18, 2022 8:52 AM
To: 'ocd.enviro@emnrd.nm.gov' <ocd.enviro@emnrd.nm.gov>; 'Bratcher, Michael, EMNRD' <mike.bratcher@emnrd.nm.gov>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@emnrd.nm.gov>; 'Harimon, Jocelyn, EMNRD' <Jocelyn.Harimon@emnrd.nm.gov>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: XTO - Sampling Notification (Week of 11/21/22 - 11/25/22)

All,

XTO plans to complete final sampling activities at the following sites the week of Nov 21, 2022.

- JRU 17 CTB/ nAPP2226628060
- BEU 158 / nAPP2230548752
- Ross Draw 2531 TB FIRE/ nAPP2226646920
- Remuda 100 CTB / nAPP2226346738
- West Brushy Fed 33 1H/ nAPP2228753314
- Ross Draw 3031/ nAPP2227244441

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

Collins, Melanie

From: Green, Garrett J
Sent: Friday, October 28, 2022 3:24 PM
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Billings, Bradford, EMNRD; Harimon, Jocelyn, EMNRD
Cc: DelawareSpills /SM
Subject: XTO 48 Hour Liner Inspection Notification - BEU 158

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at BEU 158 released on (10/19/22), on Monday, October 31, 2022, at 0730 am MST. A 24 hour release notification was not sent since the release was less than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.41970,-104.08964)

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

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 176388

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 176388
	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 #NAPP2230548752 BIG EDDY UNIT 158, thank you. This closure is approved.	4/19/2023