State of New Mexico
Oil Conservation Division

Incident ID	NAPP2219644709
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: ___Garrett Green_____ Date: __10/03/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 10/03/2022

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: 12/16/2022

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	NAPP2219644709
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 32.24849 Longitude -103.85958
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Sinks 2-24-30 Battery	Site Type Tank Battery
Date Release Discovered 07/05/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
E	02	24S	30E	Eddy

Surface Owner: [x] 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)

[x] Crude Oil	Volume Released (bbls) 5.5	Volume Recovered (bbls) 5.5
[x] Produced Water	Volume Released (bbls) 27.6	Volume Recovered (bbls) 27.6
	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: Internal corrosion caused the dump line on the separator to release fluids into impermeable containment. All fluids were recovered. A 48-hour advance liner inspection notice was sent to NMOCD District 2. Liner was 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	NAPP2219644709
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? A release greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Garrett Green to Mike Bratcher, Robert Hamlet, ocd.enviro@state.nm.us on 07/05/2022 via email.

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: 07/15/2022

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 07/15/2022

Location:	Big Sinks 2-24-30 Battery	
Spill Date:	7/5/2022	
Area 1		
Approximate Area =	185.84	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	5.50	bbls
Total Produced Water =	27.60	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**5.50**	**bbls**
Total Produced Water =	**27.60**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**5.50**	**bbls**
Total Produced Water =	**27.60**	**bbls**

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

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 125866
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	7/15/2022

Incident ID	NAPP2219644709
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2219644709
District RP	
Facility ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature:____  _____ Date: ____10/03/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 10/03/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2219644709
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: __10/03/2022_____

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

OCD Only

Received by: Jocelyn Harimon Date: 10/03/2022

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

October 3, 2022

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

Re: Closure Request
Big Sinks 2-24-30 Battery
Incident Numbers NAPP2219644709 and NAPP2220224382
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 site assessment and soil sampling activities performed at the Big Sinks 2-24-30 Battery (Site). The purpose of the site assessment and soil sampling activities was to assess the presence or absence of impacts to soil resulting from a release of crude oil and 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, describing remediation that has occurred and requesting no further action for Incident Numbers NAPP2219644709 and NAPP2220224382.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit E, Section 02, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.24849° N, 103.85958°W) and is associated with oil and gas exploration and production operations on state land managed by the New Mexico State Land Office (SLO; Figure 1).

On July 05, 2022, internal corrosion of the bulk separator water dump line resulted in the release of 5.5 barrels (bbls) of crude oil and 27.6 bbls of produced water into the impermeable containment. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; all 32.2 bbls of released fluids were recovered from within the lined containment. XTO reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) on July 05, 2022 and with a subsequent Release Notification Form C-141 (Form C-141) on July 15, 2022. The release was assigned Incident Number NAPP2219644709.

On July 16, 2022, internal corrosion of the water dump valve resulted in the release of 20.70 bbls of produced water into the impermeable containment. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; all free fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on July 20, 2022. The release was assigned Incident Number NAPP2220224382.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to determine application of Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative

Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is USGS well 321526103520101, located approximately 0.69 miles northwest of the Site. The groundwater well has a reported depth to groundwater of 440 feet bgs and a total depth of 567 feet bgs. Although the nearest water well with depth to water data is greater than ½ mile away, NMOCD guidance indicates the agency will review additional information on a case-by-case basis. Ensolum requests NMOCD consider regional groundwater trends to evaluate groundwater at this Site. In addition to the referenced water well, there are eight permitted wells within a 2-mile radius of the Site, all of which indicate depth to groundwater is greater than 100 feet bgs. In fact, most of the wells document groundwater near 400 feet bgs. The water wells exist in all directions around the Site. The Site is not located near any surface water features and is well within the low-karst potential area, which likely rules out any pathway to shallow groundwater. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Attachment 1.

The closest continuously flowing or significant watercourse to the Site is Dog Town Draw, located approximately 6,575 feet south 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 (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES

On August 23, 2022 and August 29, 2022, site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. 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 and BH01A) were collected from the borehole at depths of approximately 0.5 feet and 1 foot bgs. Soil from the delineation samples was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips, respectively. 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 soil removed and the tear in the liner was repaired. Four assessment samples (SS01 through SS04) were collected around the lined containment from a depth of 0.5 feet bgs to confirm the lateral extent of any release. The soil sample locations are depicted on Figure 2. 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 at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples from borehole BH01 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for soil samples SS01 through SS04, collected around the containment, were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

CLOSURE REQUEST

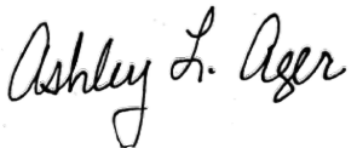
Following the failed liner integrity inspection at the Site, Ensolum personnel advanced one borehole (BH01) at the location of the tear in the liner to assess for the presence or absence of impacted soil resulting from the July 5, 2022 and July 16, 2022, crude oil and produced water releases within lined containment. 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.

Based on initial response efforts, depth to groundwater greater than 100 feet bgs, and soil sample laboratory analytical results compliant with the Closure Criteria directly beneath the tear in the liner, XTO respectfully requests closure for Incident Numbers NAPP2219644709 and NAPP2220224382.

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

Sincerely,

Ensolum, LLC



Anita Thapalia
Project Geologist

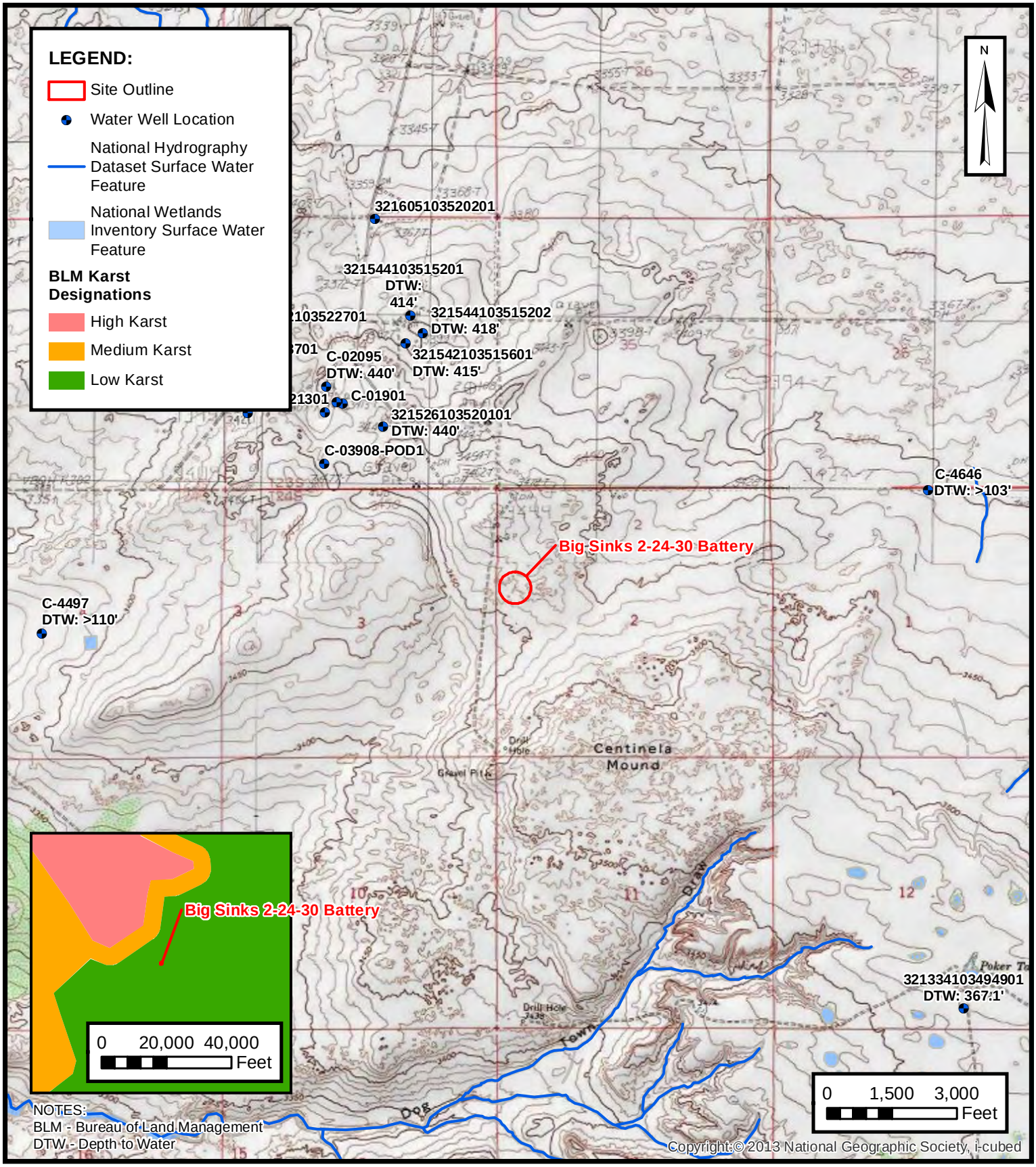
Ashley Ager
Program Director

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

Appendices:
Figure 1 Site Receptor Map
Figure 2 Delineation Soil Sample Locations
Table 1 Soil Sample Analytical Results

ENSOLUM

FIGURES



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Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
BIG SINKS 2-24-30 BATTERY
NAPP2219644709 & NAPP2220224382
Unit E, Sec 02, T24S, R30E
Eddy County, New Mexico

FIGURE
1

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
BIG SINKS 2-24-30 BATTERY
NAPP2219644709 & NAPP2220224382
Unit E, Sec 2, T24S, R30E
Eddy County, New Mexico

FIGURE

2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Big Sinks 2-24-30 Battery
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Delineation Soil Samples										
SS01	08/23/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	17.0
SS02	08/23/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	13.3
SS03	08/23/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	228
SS04	08/23/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	132
BH01	08/29/2022	0.5	<0.0020	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	990
BH01A	08/29/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	107

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

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APPENDIX A

Referenced Well Records

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 321526103520101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

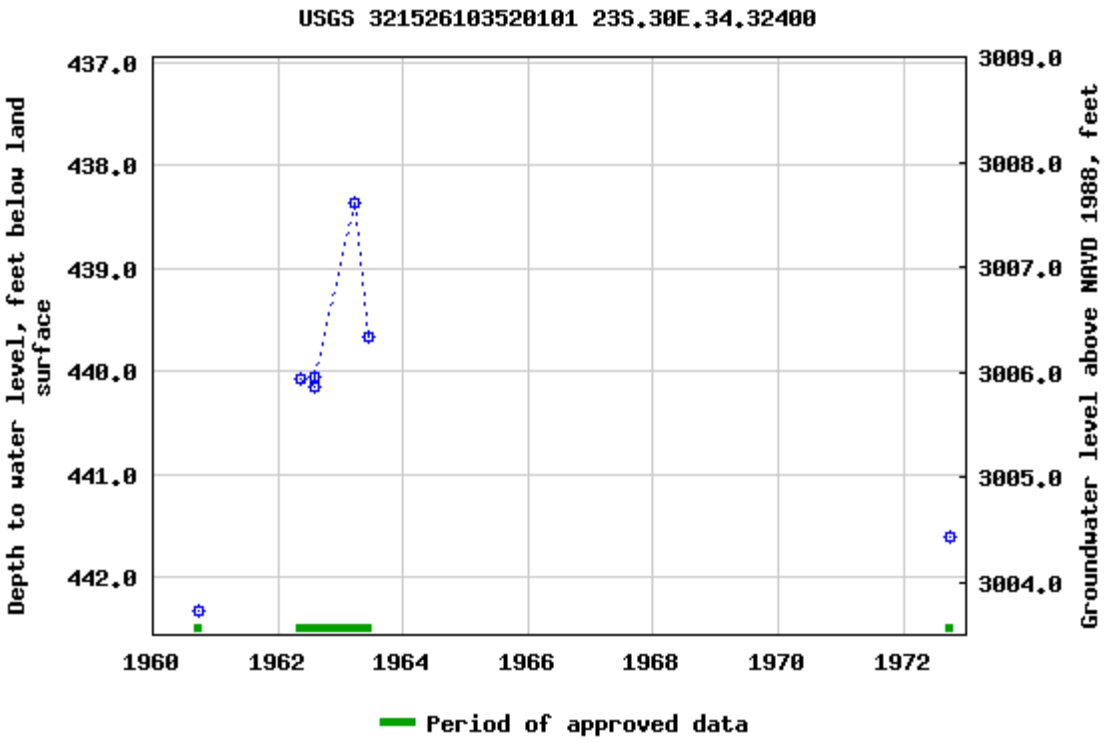
USGS 321526103520101 23S.30E.34.32400

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°15'26", Longitude 103°52'01" NAD27
Land-surface elevation 3,446 feet above NAVD88
The depth of the well is 567 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

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

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twp	Rng	X	Y
	C 03908 POD1	3	4	3	34	23S	30E	606331	3569300

Driller License: **Driller Company:**

Driller Name: UNKNOWN

Drill Start Date:	**Drill Finish Date:**	**Plug Date:**
Log File Date:	**PCW Rcv Date:**	**Source:**
Pump Type:	**Pipe Discharge Size:**	**Estimated Yield:**
Casing Size: 13.00	**Depth Well:** 760 feet	**Depth Water:**

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APPENDIX B

Lithologic Soil Sampling Logs

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	Sample Name: BH01	Date:08/29/2022
	Site Name: Big Sinks 2-24-30 Battery	
	Incident Number: NAPP2219644709 & NAPP2220224382	
	Job Number: 03E1558095	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CB	Method: Hand auger
Coordinates: 32.24849, -103.85958	Hole Diameter: 3.5'	Total Depth: 4'

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. A 40% error factor is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M			Y			0		
	1,336	3.7		BH01	0.5		CCHE	Caliche, pad material
	168	0.8		BH01A	1	1	CCHE	Caliche, pad material
	<157	0.2			2	2		
	<157	0.1			3	3		
	<157	0.1			4	4	TD	Total Depth at 4 feet bgs.

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
Big Sinks 2-24-30 Battery
Incident Numbers NAPP2219644709 & NAPP2220224382

Photograph 1 Date: July 11, 2022
Description: View northeast of tears in the liner marked with white paint.

Photograph 2 Date: July 11, 2022
Description: View of liner facing south.

Photograph 3 Date: August 29, 2022
Description: View of location of BH01 during liner delineation.

Photograph 4 Date: August 29, 2022
Description: Photo of liner following the liner delination assessment.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2807-1
Laboratory Sample Delivery Group: 03E1558095
Client Project/Site: PLU Big Sinks 2-24-30 Battery

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/5/2022 8:27:53 PM

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

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

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

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Laboratory Job ID: 890-2807-1
SDG: 03E1558095

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2807-1
Project/Site: PLU Big Sinks 2-24-30 Battery SDG: 03E1558095

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Job ID: 890-2807-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2807-1

Receipt
The samples were received on 8/23/2022 1:16 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 3.0°C

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): SS01 (890-2807-1), SS02 (890-2807-2), SS02 (890-2807-3) and SS04 (890-2807-4). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.
890-2807
COC Says
SS01 8-23-22
SS02 8-24-22
SS03 8-25-22
SS04 8-26-22

Jars Says
SS01,SS02,SS03,SS04 with sample dates as 8-23-22

Printing error on COCs samples cannot be taken in the future- all samples collected on 8-23-22

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-33658 and analytical batch 880-33696 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-33658/1-A), (LCSD 880-33658/2-A), (880-18455-A-1-D), (880-18455-A-1-B MS) and (880-18455-A-1-C MSD). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS01 (890-2807-1). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS02 (890-2807-2), SS02 (890-2807-3) and SS04 (890-2807-4). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: (890-2799-A-1-B MS) and (890-2799-A-1-C MSD). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method 8015MOD_NM: The method blank for preparation batch 880-32866 and analytical batch 880-32894 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples 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.

Case Narrative

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Job ID: 890-2807-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Client Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Client Sample ID: SS01

Lab Sample ID: 890-2807-1
Matrix: Solid
Date Collected: 08/23/22 10:00
Date Received: 08/23/22 13:16
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 17:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 17:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 17:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/02/22 15:18	09/05/22 17:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 17:59	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/02/22 15:18	09/05/22 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*09/02/22 15:18*	*09/05/22 17:59*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/02/22 15:18*	*09/05/22 17:59*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/05/22 18:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/26/22 09:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 15:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 15:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*08/24/22 16:32*	*08/25/22 15:49*	*1*
o-Terphenyl	*72*		*70 - 130*	*08/24/22 16:32*	*08/25/22 15:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.0**		5.03		mg/Kg			08/30/22 07:31	1

Client Sample ID: SS02

Lab Sample ID: 890-2807-2
Matrix: Solid
Date Collected: 08/23/22 10:05
Date Received: 08/23/22 13:16
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 18:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 18:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 18:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/02/22 15:18	09/05/22 18:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/02/22 15:18	09/05/22 18:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/02/22 15:18	09/05/22 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*	*09/02/22 15:18*	*09/05/22 18:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Client Sample ID: SS02

Date Collected: 08/23/22 10:05
Date Received: 08/23/22 13:16
Sample Depth: 0.5

Lab Sample ID: 890-2807-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*09/02/22 15:18*	*09/05/22 18:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/05/22 18:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/26/22 09:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/24/22 16:32	08/25/22 16:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/24/22 16:32	08/25/22 16:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/24/22 16:32	08/25/22 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*08/24/22 16:32*	*08/25/22 16:31*	*1*
o-Terphenyl	*86*		*70 - 130*	*08/24/22 16:32*	*08/25/22 16:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.3**		5.05	mg/Kg			08/30/22 07:41	1

Client Sample ID: SS02

Date Collected: 08/23/22 10:10
Date Received: 08/23/22 13:16
Sample Depth: 0.5

Lab Sample ID: 890-2807-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/02/22 15:18	09/05/22 18:53	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/02/22 15:18	09/05/22 18:53	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/02/22 15:18	09/05/22 18:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/02/22 15:18	09/05/22 18:53	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/02/22 15:18	09/05/22 18:53	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/02/22 15:18	09/05/22 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*09/02/22 15:18*	*09/05/22 18:53*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/02/22 15:18*	*09/05/22 18:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/05/22 18:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/26/22 09:25	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Client Sample ID: SS02

Lab Sample ID: 890-2807-3
Matrix: Solid
Date Collected: 08/23/22 10:10
Date Received: 08/23/22 13:16
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/24/22 16:32	08/25/22 16:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/24/22 16:32	08/25/22 16:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/24/22 16:32	08/25/22 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*08/24/22 16:32*	*08/25/22 16:53*	*1*
o-Terphenyl	*78*		*70 - 130*	*08/24/22 16:32*	*08/25/22 16:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**228**		24.9		mg/Kg			08/30/22 07:50	5

Client Sample ID: SS04

Lab Sample ID: 890-2807-4
Matrix: Solid
Date Collected: 08/23/22 10:15
Date Received: 08/23/22 13:16
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/02/22 15:18	09/05/22 19:19	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/02/22 15:18	09/05/22 19:19	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/02/22 15:18	09/05/22 19:19	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/02/22 15:18	09/05/22 19:19	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/02/22 15:18	09/05/22 19:19	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/02/22 15:18	09/05/22 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*153*	*S1+*	*70 - 130*	*09/02/22 15:18*	*09/05/22 19:19*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/02/22 15:18*	*09/05/22 19:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/05/22 18:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/26/22 09:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 17:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 17:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*08/24/22 16:32*	*08/25/22 17:14*	*1*
o-Terphenyl	*75*		*70 - 130*	*08/24/22 16:32*	*08/25/22 17:14*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Client Sample ID: SS04
Date Collected: 08/23/22 10:15
Date Received: 08/23/22 13:16
Sample Depth: 0.5

Lab Sample ID: 890-2807-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	132		4.98		mg/Kg			08/30/22 07:59	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

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)
880-18455-A-1-B MS	Matrix Spike	143 S1+	90
880-18455-A-1-C MSD	Matrix Spike Duplicate	141 S1+	96
890-2807-1	SS01	152 S1+	103
890-2807-2	SS02	145 S1+	104
890-2807-3	SS02	143 S1+	101
890-2807-4	SS04	153 S1+	101
LCS 880-33658/1-A	Lab Control Sample	141 S1+	95
LCSD 880-33658/2-A	Lab Control Sample Dup	137 S1+	90
MB 880-33371/5-A	Method Blank	103	69 S1-
MB 880-33658/5-A	Method Blank	105	71

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)
890-2799-A-1-B MS	Matrix Spike	74	67 S1-
890-2799-A-1-C MSD	Matrix Spike Duplicate	78	69 S1-
890-2807-1	SS01	75	72
890-2807-2	SS02	89	86
890-2807-3	SS02	76	78
890-2807-4	SS04	74	75
LCS 880-32866/2-A	Lab Control Sample	81	93
LCSD 880-32866/3-A	Lab Control Sample Dup	92	108
MB 880-32866/1-A	Method Blank	88	95

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33371/5-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33371

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/30/22 14:16	09/04/22 20:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/30/22 14:16	09/04/22 20:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/30/22 14:16*	*09/04/22 20:08*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*08/30/22 14:16*	*09/04/22 20:08*	*1*

Lab Sample ID: MB 880-33658/5-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33658

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/02/22 15:18	09/05/22 09:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/02/22 15:18	09/05/22 09:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/02/22 15:18*	*09/05/22 09:38*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*09/02/22 15:18*	*09/05/22 09:38*	*1*

Lab Sample ID: LCS 880-33658/1-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1064		mg/Kg		106	70 - 130		
Toluene			0.100	0.1061		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.09992		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2000		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.1148		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-33658/2-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1115		mg/Kg		111	70 - 130	5	35

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

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

Lab Sample ID: LCSD 880-33658/2-A
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1107		mg/Kg		111	70 - 130	4	35
Ethylbenzene			0.100	0.1018		mg/Kg		102	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2028		mg/Kg		101	70 - 130	1	35
o-Xylene			0.100	0.1164		mg/Kg		116	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-18455-A-1-B MS
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33658

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0998	0.09194		mg/Kg		92	70 - 130
Toluene	<0.00199	U	0.0998	0.07491		mg/Kg		75	70 - 130
Ethylbenzene	<0.00199	U F1	0.0998	0.05497	F1	mg/Kg		55	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1039	F1	mg/Kg		52	70 - 130
o-Xylene	<0.00199	U F1	0.0998	0.06000	F1	mg/Kg		60	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-18455-A-1-C MSD
Matrix: Solid
Analysis Batch: 33696

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33658

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.09655		mg/Kg		97	70 - 130	5	35
Toluene	<0.00199	U	0.0996	0.07924		mg/Kg		80	70 - 130	6	35
Ethylbenzene	<0.00199	U F1	0.0996	0.05768	F1	mg/Kg		58	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1102	F1	mg/Kg		55	70 - 130	6	35
o-Xylene	<0.00199	U F1	0.0996	0.06536	F1	mg/Kg		66	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-32866/1-A
Matrix: Solid
Analysis Batch: 32894

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32866

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		08/24/22 16:32	08/25/22 10:52	1

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

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

Lab Sample ID: MB 880-32866/1-A
Matrix: Solid
Analysis Batch: 32894

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32866

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 10:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/22 16:32	08/25/22 10:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/24/22 16:32*	*08/25/22 10:52*	*1*
o-Terphenyl	*95*		*70 - 130*	*08/24/22 16:32*	*08/25/22 10:52*	*1*

Lab Sample ID: LCS 880-32866/2-A
Matrix: Solid
Analysis Batch: 32894

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32866

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	858.4		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	863.3		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*81*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: LCSD 880-32866/3-A
Matrix: Solid
Analysis Batch: 32894

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32866

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	926.7		mg/Kg		93	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	979.5		mg/Kg		98	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: 890-2799-A-1-B MS
Matrix: Solid
Analysis Batch: 32894

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32866

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	761.1		mg/Kg		72	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	717.7		mg/Kg		72	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*67*	*S1-*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

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

Lab Sample ID: 890-2799-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32894 — **Prep Batch: 32866**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	783.2		mg/Kg		74	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	734.2		mg/Kg		74	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*78*		*70 - 130*
o-Terphenyl	*69*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-32918/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33245

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/30/22 03:23	1

Lab Sample ID: LCS 880-32918/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33245

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.2		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-32918/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33245

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	251.4		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-18467-A-3-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33245

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	1080		252	1314	4	mg/Kg		91	90 - 110		

Lab Sample ID: 880-18467-A-3-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 33245

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1080		252	1320	4	mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

GC VOA

Prep Batch: 33371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-33371/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 33658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Total/NA	Solid	5035	
890-2807-2	SS02	Total/NA	Solid	5035	
890-2807-3	SS02	Total/NA	Solid	5035	
890-2807-4	SS04	Total/NA	Solid	5035	
MB 880-33658/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33658/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33658/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-18455-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-18455-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Total/NA	Solid	8021B	33658
890-2807-2	SS02	Total/NA	Solid	8021B	33658
890-2807-3	SS02	Total/NA	Solid	8021B	33658
890-2807-4	SS04	Total/NA	Solid	8021B	33658
MB 880-33371/5-A	Method Blank	Total/NA	Solid	8021B	33371
MB 880-33658/5-A	Method Blank	Total/NA	Solid	8021B	33658
LCS 880-33658/1-A	Lab Control Sample	Total/NA	Solid	8021B	33658
LCSD 880-33658/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33658
880-18455-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	33658
880-18455-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33658

Analysis Batch: 33773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Total/NA	Solid	Total BTEX	
890-2807-2	SS02	Total/NA	Solid	Total BTEX	
890-2807-3	SS02	Total/NA	Solid	Total BTEX	
890-2807-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 32866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Total/NA	Solid	8015NM Prep	
890-2807-2	SS02	Total/NA	Solid	8015NM Prep	
890-2807-3	SS02	Total/NA	Solid	8015NM Prep	
890-2807-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-32866/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32866/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32866/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2799-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2799-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 32894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Total/NA	Solid	8015B NM	32866

QC Association Summary

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

GC Semi VOA (Continued)

Analysis Batch: 32894 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-2	SS02	Total/NA	Solid	8015B NM	32866
890-2807-3	SS02	Total/NA	Solid	8015B NM	32866
890-2807-4	SS04	Total/NA	Solid	8015B NM	32866
MB 880-32866/1-A	Method Blank	Total/NA	Solid	8015B NM	32866
LCS 880-32866/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32866
LCSD 880-32866/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32866
890-2799-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	32866
890-2799-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32866

Analysis Batch: 33029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Total/NA	Solid	8015 NM	
890-2807-2	SS02	Total/NA	Solid	8015 NM	
890-2807-3	SS02	Total/NA	Solid	8015 NM	
890-2807-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 32918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Soluble	Solid	DI Leach	
890-2807-2	SS02	Soluble	Solid	DI Leach	
890-2807-3	SS02	Soluble	Solid	DI Leach	
890-2807-4	SS04	Soluble	Solid	DI Leach	
MB 880-32918/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-32918/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-32918/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-18467-A-3-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18467-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2807-1	SS01	Soluble	Solid	300.0	32918
890-2807-2	SS02	Soluble	Solid	300.0	32918
890-2807-3	SS02	Soluble	Solid	300.0	32918
890-2807-4	SS04	Soluble	Solid	300.0	32918
MB 880-32918/1-A	Method Blank	Soluble	Solid	300.0	32918
LCS 880-32918/2-A	Lab Control Sample	Soluble	Solid	300.0	32918
LCSD 880-32918/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	32918
880-18467-A-3-F MS	Matrix Spike	Soluble	Solid	300.0	32918
880-18467-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	32918

Lab Chronicle

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Client Sample ID: SS01
Date Collected: 08/23/22 10:00
Date Received: 08/23/22 13:16

Lab Sample ID: 890-2807-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	33658	09/02/22 15:18	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33696	09/05/22 17:59	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33773	09/05/22 18:19	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33029	08/26/22 09:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32866	08/24/22 16:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	32894	08/25/22 15:49	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	32918	08/25/22 09:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33245	08/30/22 07:31	CH	EET MID

Client Sample ID: SS02
Date Collected: 08/23/22 10:05
Date Received: 08/23/22 13:16

Lab Sample ID: 890-2807-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	33658	09/02/22 15:18	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33696	09/05/22 18:26	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33773	09/05/22 18:19	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33029	08/26/22 09:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	32866	08/24/22 16:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	32894	08/25/22 16:31	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	32918	08/25/22 09:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33245	08/30/22 07:41	CH	EET MID

Client Sample ID: SS02
Date Collected: 08/23/22 10:10
Date Received: 08/23/22 13:16

Lab Sample ID: 890-2807-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	33658	09/02/22 15:18	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33696	09/05/22 18:53	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33773	09/05/22 18:19	AJ	EET MID
Total/NA	Analysis	8015 NM		1			33029	08/26/22 09:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	32866	08/24/22 16:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	32894	08/25/22 16:53	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32918	08/25/22 09:42	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33245	08/30/22 07:50	CH	EET MID

Client Sample ID: SS04
Date Collected: 08/23/22 10:15
Date Received: 08/23/22 13:16

Lab Sample ID: 890-2807-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	33658	09/02/22 15:18	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33696	09/05/22 19:19	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			33773	09/05/22 18:19	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Client Sample ID: SS04
Date Collected: 08/23/22 10:15
Date Received: 08/23/22 13:16

Lab Sample ID: 890-2807-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			33029	08/26/22 09:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32866	08/24/22 16:32	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	32894	08/25/22 17:14	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	32918	08/25/22 09:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33245	08/30/22 07:59	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

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: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

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: PLU Big Sinks 2-24-30 Battery

Job ID: 890-2807-1
SDG: 03E1558095

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2807-1	SS01	Solid	08/23/22 10:00	08/23/22 13:16	0.5
890-2807-2	SS02	Solid	08/23/22 10:05	08/23/22 13:16	0.5
890-2807-3	SS02	Solid	08/23/22 10:10	08/23/22 13:16	0.5
890-2807-4	SS04	Solid	08/23/22 10:15	08/23/22 13:16	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.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:	PLU BIG SINKS 2-24-30 Battery	Turn Around	
Project Number:	03E1558095	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Connor Whitman	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:	Thm-00	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.2	
Total Containers:		Corrected Temperature:	3.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021
SS01	S	8/23/2022	10:00	0.5'	G	1		x	x	x
SS02	S	8/24/2022	10:05	0.5'	G	1		x	x	x
SS02	S	8/25/2022	10:10	0.5'	G	1		x	x	x
SS04	S	8/26/2022	10:15	0.5'	G	1		x	x	x

Parameters

890-2807 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID:
NAPP2219644709 & NAPP220224382
Cost Center:
1080751001
AFE:

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		8.23.22 1315	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2807-1
SDG Number: 03E1558095

Login Number: 2807
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2807-1
SDG Number: 03E1558095

Login Number: 2807
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/24/22 10:58 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2861-1
Laboratory Sample Delivery Group: Eddy County
Client Project/Site: Big Sinks 2-24-30

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/9/2022 1:48:13 PM

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

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

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

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Laboratory Job ID: 890-2861-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
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
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: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

Job ID: 890-2861-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2861-1

Receipt
The samples were received on 8/30/2022 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-33944 and analytical batch 880-33982 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-33565/2-A) and (LCSD 880-33565/3-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

Client Sample ID: BH01

Date Collected: 08/29/22 12:00
Date Received: 08/30/22 09:10
Sample Depth: 0.5

Lab Sample ID: 890-2861-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 07:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 07:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 07:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/07/22 16:02	09/09/22 07:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 07:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/07/22 16:02	09/09/22 07:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*09/07/22 16:02*	*09/09/22 07:56*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*09/07/22 16:02*	*09/09/22 07:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/09/22 14:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/06/22 10:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 20:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 20:17	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*09/01/22 15:50*	*09/02/22 20:17*	*1*
o-Terphenyl	*87*		*70 - 130*	*09/01/22 15:50*	*09/02/22 20:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**990**		49.9		mg/Kg			09/08/22 14:17	10

Client Sample ID: BH01A

Date Collected: 08/29/22 12:15
Date Received: 08/30/22 09:10
Sample Depth: 1

Lab Sample ID: 890-2861-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/07/22 16:02	09/09/22 08:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/07/22 16:02	09/09/22 08:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/07/22 16:02	09/09/22 08:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/07/22 16:02	09/09/22 08:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/07/22 16:02	09/09/22 08:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/07/22 16:02	09/09/22 08:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*09/07/22 16:02*	*09/09/22 08:22*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

Client Sample ID: BH01A
Date Collected: 08/29/22 12:15
Date Received: 08/30/22 09:10
Sample Depth: 1

Lab Sample ID: 890-2861-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*09/07/22 16:02*	*09/09/22 08:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/09/22 14:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/06/22 10:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 21:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 21:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/01/22 15:50	09/02/22 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*09/01/22 15:50*	*09/02/22 21:22*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/01/22 15:50*	*09/02/22 21:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**107**		4.98		mg/Kg			09/08/22 14:31	1

Surrogate Summary

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
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)
890-2858-A-1-F MS	Matrix Spike	89	115
890-2858-A-1-G MSD	Matrix Spike Duplicate	127	83
890-2861-1	BH01	123	70
890-2861-2	BH01A	123	96
LCS 880-33944/1-A	Lab Control Sample	91	78
LCSD 880-33944/2-A	Lab Control Sample Dup	111	76
MB 880-33944/5-A	Method Blank	80	74
MB 880-33982/8	Method Blank	70	81

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)
890-2861-1	BH01	97	87
890-2861-1 MS	BH01	119	92
890-2861-1 MSD	BH01	121	97
890-2861-2	BH01A	129	116
LCS 880-33565/2-A	Lab Control Sample	152 S1+	123
LCSD 880-33565/3-A	Lab Control Sample Dup	156 S1+	130
MB 880-33565/1-A	Method Blank	124	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33944/5-A
Matrix: Solid
Analysis Batch: 33982

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33944

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 01:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 01:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 01:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/07/22 16:02	09/09/22 01:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/07/22 16:02	09/09/22 01:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/07/22 16:02	09/09/22 01:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/07/22 16:02*	*09/09/22 01:49*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*09/07/22 16:02*	*09/09/22 01:49*	*1*

Lab Sample ID: LCS 880-33944/1-A
Matrix: Solid
Analysis Batch: 33982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33944

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08825		mg/Kg		88	70 - 130		
Toluene			0.100	0.1024		mg/Kg		102	70 - 130		
Ethylbenzene			0.100	0.1040		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2047		mg/Kg		102	70 - 130		
o-Xylene			0.100	0.09568		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*

Lab Sample ID: LCSD 880-33944/2-A
Matrix: Solid
Analysis Batch: 33982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33944

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1046		mg/Kg		105	70 - 130	17	35
Toluene			0.100	0.1068		mg/Kg		107	70 - 130	4	35
Ethylbenzene			0.100	0.1050		mg/Kg		105	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2095		mg/Kg		105	70 - 130	2	35
o-Xylene			0.100	0.1027		mg/Kg		103	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*

Lab Sample ID: 890-2858-A-1-F MS
Matrix: Solid
Analysis Batch: 33982

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33944

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F2 F1	0.0998	0.03455	F1	mg/Kg		35	70 - 130		
Toluene	<0.00200	U F2 F1	0.0998	0.03528	F1	mg/Kg		35	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

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

Lab Sample ID: 890-2858-A-1-F MS
Matrix: Solid
Analysis Batch: 33982

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33944

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.03343	F1	mg/Kg		33	70 - 130
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.200	0.07001	F1	mg/Kg		35	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0998	0.03721	F1	mg/Kg		37	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 890-2858-A-1-G MSD
Matrix: Solid
Analysis Batch: 33982

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33944

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F2 F1	0.100	0.09876	F2	mg/Kg		99	70 - 130	96	35
Toluene	<0.00200	U F2 F1	0.100	0.1023	F2	mg/Kg		102	70 - 130	97	35
Ethylbenzene	<0.00200	U F2 F1	0.100	0.09731	F2	mg/Kg		97	70 - 130	98	35
m-Xylene & p-Xylene	<0.00399	U F2 F1	0.200	0.1927	F2	mg/Kg		96	70 - 130	93	35
o-Xylene	<0.00200	U F2 F1	0.100	0.09421	F2	mg/Kg		94	70 - 130	87	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: MB 880-33982/8
Matrix: Solid
Analysis Batch: 33982

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			09/08/22 11:40	1
Toluene	<0.00200	U	0.00200	mg/Kg			09/08/22 11:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			09/08/22 11:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			09/08/22 11:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			09/08/22 11:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			09/08/22 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*		*09/08/22 11:40*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*		*09/08/22 11:40*	*1*

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/01/22 15:50	09/02/22 19:12	1

QC Sample Results

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

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

Lab Sample ID: MB 880-33565/1-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33565

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 19:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/01/22 15:50	09/02/22 19:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/01/22 15:50*	*09/02/22 19:12*	*1*

Lab Sample ID: LCS 880-33565/2-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	846.8		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	876.5		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*152*	*S1+*	*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-33565/3-A
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33565

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.2		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	909.9		mg/Kg		91	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*156*	*S1+*	*70 - 130*
o-Terphenyl	*130*		*70 - 130*

Lab Sample ID: 890-2861-1 MS
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 33565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	989.5		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1046		mg/Kg		105	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

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

Lab Sample ID: 890-2861-1 MSD
Matrix: Solid
Analysis Batch: 33582

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 33565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1037		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1069		mg/Kg		107	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33552/1-A
Matrix: Solid
Analysis Batch: 33925

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/08/22 12:35	1

Lab Sample ID: LCS 880-33552/2-A
Matrix: Solid
Analysis Batch: 33925

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.9		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33552/3-A
Matrix: Solid
Analysis Batch: 33925

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	252.8		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-18647-A-35-C MS
Matrix: Solid
Analysis Batch: 33925

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	30.9		251	282.5		mg/Kg		100	90 - 110		

Lab Sample ID: 880-18647-A-35-D MSD
Matrix: Solid
Analysis Batch: 33925

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	30.9		251	282.1		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

GC VOA

Prep Batch: 33944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Total/NA	Solid	5035	
890-2861-2	BH01A	Total/NA	Solid	5035	
MB 880-33944/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33944/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33944/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2858-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2858-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Total/NA	Solid	8021B	33944
890-2861-2	BH01A	Total/NA	Solid	8021B	33944
MB 880-33944/5-A	Method Blank	Total/NA	Solid	8021B	33944
MB 880-33982/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-33944/1-A	Lab Control Sample	Total/NA	Solid	8021B	33944
LCSD 880-33944/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33944
890-2858-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	33944
890-2858-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33944

Analysis Batch: 34118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Total/NA	Solid	Total BTEX	
890-2861-2	BH01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Total/NA	Solid	8015NM Prep	
890-2861-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2861-1 MS	BH01	Total/NA	Solid	8015NM Prep	
890-2861-1 MSD	BH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Total/NA	Solid	8015B NM	33565
890-2861-2	BH01A	Total/NA	Solid	8015B NM	33565
MB 880-33565/1-A	Method Blank	Total/NA	Solid	8015B NM	33565
LCS 880-33565/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33565
LCSD 880-33565/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33565
890-2861-1 MS	BH01	Total/NA	Solid	8015B NM	33565
890-2861-1 MSD	BH01	Total/NA	Solid	8015B NM	33565

Analysis Batch: 33828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Total/NA	Solid	8015 NM	
890-2861-2	BH01A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

HPLC/IC

Leach Batch: 33552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Soluble	Solid	DI Leach	
890-2861-2	BH01A	Soluble	Solid	DI Leach	
MB 880-33552/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2861-1	BH01	Soluble	Solid	300.0	33552
890-2861-2	BH01A	Soluble	Solid	300.0	33552
MB 880-33552/1-A	Method Blank	Soluble	Solid	300.0	33552
LCS 880-33552/2-A	Lab Control Sample	Soluble	Solid	300.0	33552
LCSD 880-33552/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33552
880-18647-A-35-C MS	Matrix Spike	Soluble	Solid	300.0	33552
880-18647-A-35-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33552

Lab Chronicle

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

Client Sample ID: BH01
Date Collected: 08/29/22 12:00
Date Received: 08/30/22 09:10

Lab Sample ID: 890-2861-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	33944	09/07/22 16:02	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33982	09/09/22 07:56	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34118	09/09/22 14:38	SM	EET MID
Total/NA	Analysis	8015 NM		1			33828	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 20:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	33925	09/08/22 14:17	CH	EET MID

Client Sample ID: BH01A
Date Collected: 08/29/22 12:15
Date Received: 08/30/22 09:10

Lab Sample ID: 890-2861-2
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	33944	09/07/22 16:02	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33982	09/09/22 08:22	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34118	09/09/22 14:38	SM	EET MID
Total/NA	Analysis	8015 NM		1			33828	09/06/22 10:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33565	09/01/22 15:50	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33582	09/02/22 21:22	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	33552	09/01/22 13:14	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33925	09/08/22 14:31	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Big Sinks 2-24-30

Job ID: 890-2861-1
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: Big Sinks 2-24-30

Job ID: 890-2861-1
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: Big Sinks 2-24-30

Job ID: 890-2861-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2861-1	BH01	Solid	08/29/22 12:00	08/30/22 09:10	0.5
890-2861-2	BH01A	Solid	08/29/22 12:15	08/30/22 09:10	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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks	Address:	3401 E Greene St
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	Carlsbad NM 88220
Phone:	337-257-8507	Email:	Tmorrissey@ensolum

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:	BTG Sinks 2-24-30	Turn Around	
Project Number:	03E1558095	☑ Routine ☐ Rush	
Project Location:	Eddy County	Due Date:	
Sampler's Name:	CB	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:	TNM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.6
Total Containers:		Corrected Temperature:	5.4

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: CHL / BTX / TPH	Sample Comments
BH01	S	8-29	1200	.5	G	1	X X X	
BH01A	S	8-29	1215	1Ft	G	1	X X X	
BH01@B	S	8-29	1230	4Ft	G	1	X X X	Hold
								Inc ID NAPP2220224382
								CC 1080751001

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		8.30.22 918	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2861-1
SDG Number: Eddy County

Login Number: 2861
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2861-1
SDG Number: Eddy County

Login Number: 2861
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/31/22 11:18 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

Green, Garrett J

From: Green, Garrett J
Sent: Tuesday, July 5, 2022 3:32 PM
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc: Pennington, Shelby G; DelawareSpills /SM
Subject: XTO 24 Hour Notification - Big Sinks 2-24-30 - Released on 7/5/22

All,

This is notification of a release greater than 25 barrels that occurred today at the Big Sinks 2-24-30 Battery near the GPS coordinates given below. All of the fluids remained in containment and all standing fluids were recovered by vacuum truck. Details will be provided with a form C-141. Please contact us with any questions or concerns.

GPS: 32.24849,-103.85958

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, July 8, 2022 1:13 PM
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc: Pennington, Shelby G; DelawareSpills /SM
Subject: RE: XTO 48 Hour Liner Notification - Big Sinks 2-24-30 - Released on 7/5/22

My apologies, please see correction below. Inspection date is July 11, 2022.

From: Green, Garrett J
Sent: Friday, July 8, 2022 11:46 AM
To: 'ocd.enviro@state.nm.us' <ocd.enviro@state.nm.us>; 'Bratcher, Mike, EMNRD' <mike.bratcher@state.nm.us>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@state.nm.us>
Cc: Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: XTO 48 Hour Liner Notification - Big Sinks 2-24-30 - Released on 7/5/22

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at Big Sinks 2-24-30 released on (7/5/2022), on Monday, July 11, 2022, at 9am MST. A 24 hour release notification was sent out on Tuesday, July 5, 2022 3:32 PM since the release was greater than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.24849,-103.85958)

Thank you,

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

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

From: Green, Garrett J
To: ocd.enviro@state.nm.us; mike.bratcher@state.nm.us; Hamlet, Robert, EMNRD
Cc: Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 8/29/22 - 9/2/22)
Date: Friday, August 26, 2022 3:15:37 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of August 29, 2022.

Monday
- Brushy Draw West 25 / nAPP2216138431
- Big Sinks 2-24-30 / nAPP2219644709 & nAPP2220224382

Tuesday
- Brushy Draw West 25 / nAPP2216138431
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- ADU 816/ NAB1435334641

Wednesday
- Brushy Draw West 25 / nAPP2216138431
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- ADU 816/ NAB1435334641
- PLU Pierce Canyon 12 / nAPP2222044186

Thursday
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- JRU DI2/ nAPP2211654411 & nAPP2208349430

Friday
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- PLU S Frac Pond / nAPP2211150068

Thank you!

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

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

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

CONDITIONS

Action 148076

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 148076
	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 #NAPP2219644709 BIG SINKS 02-24-30 BATTERY, thank you. This closure is approved.	12/16/2022