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	NAPP2310044397
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 32.09447 Longitude -103.83633

(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU Phantom Banks 25-25-30 Battery	Site Type Central Tank Battery
Date Release Discovered 04/01/2023	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
N	25	25S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.35	Volume Recovered (bbls) 0.00
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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: Battery loaded up, which resulted in fluid escaping the flare and igniting on pad surface. LO extinguished fire and shut in wells. No injuries were reported. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2310044397
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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 that results in a fire or is the result of a fire.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Melanie Collins to ocd.enviro@emnrd.nm.gov, Robert.Hamlet@emnrd.nm.gov. Mike.Bratcher@emnrd.nm.gov, and Jocelyn.Harimon@emnrd.nm.gov on 04/02/2023 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: 4/10/2023
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon
Date: 04/10/2023

Location:	PLU Phantom Banks 25-25-30 Battery	
Spill Date:	4/1/2023	
Area 1		
Approximate Area =	780.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.35	bbls
Total Produced Water =	0.00	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.35**	**bbls**
Total Produced Water =	**0.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**0.00**	**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: 205650
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2310044397
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	NAPP2310044397
District RP	
Facility ID	
Application ID	

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

Printed Name: Garrett Green Title: HSSE Coordinator

Signature: Date: 8/25/2023

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

OCD Only

Received by: Shelly Wells Date: 8/25/2023

Incident ID	NAPP2310044397
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.***

[x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[x] 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)

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

[x] 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: HSSE Coordinator

Signature: Date: 8/25/2023

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

OCD Only

Received by: Shelly Wells Date: 8/25/2023

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

Closure Approved by: Date:

Printed Name: Title:

ENSOLUM

August 25, 2023

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

Re: Closure Request
PLU Phantom Banks 25-25-30 Battery
Incident Number NAPP2310044397
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities at the PLU Phantom Banks 25-25-30 Battery (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil following a crude oil release at the Site. Based on excavation activities and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2310044397.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit N, Section 25, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.09447°, -103.83633°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On April 1, 2023, the battery loaded up, which resulted in fluid escaping the flare and igniting on the pad surface. The fire was immediately extinguished and the well was shut in. The release caused approximately 0.35 barrels (bbls) of crude oil to be released to the ground surface with no fluids recovered following the release. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on April 2, 2023, via email and on a Release Notification Form C-141 (Form C-141) on April 10, 2023. The release was assigned Incident Number NAPP2310044397.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. 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 the New Mexico Office of the State Engineer (OSE) well C-4498-POD1, located approximately 0.49 miles northwest of the Site. The depth to water boring was installed on February 24, 2021, to assess for the presence or absence of groundwater at or shallower than 100 feet bgs. The boring was drilled to a total depth of 109 feet bgs and allowed to equilibrate for at least 72 hours to allow for slow infill of water to enter the well, if present. Groundwater was not detected during drilling or after the 72-hour waiting period. As such, depth to water beneath the Site has been reasonably estimated to

be greater than 109 feet bgs. The Well Record and Log is included in Appendix A. All wells used to determine depth are presented on Figure 1.

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, significant water course, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area).

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture/right-of-way (ROW) area of where the release extent occurred, per 19.15.29.13.D (1) NMAC.

SITE ASSESSMENT ACTIVITIES

On June 5, 2023, Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four delineation soil samples (SS01 through SS04) were collected around the release extent at a depth of 0.5 feet bgs to assess the lateral extent of the release. In addition, two potholes (PH01 and PH02) were advanced via backhoe within the release extent to a total depth of 1-foot bgs to assess the vertical extent of the release. All soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photo documentation was conducted during the Site visits and a photographic log is included in Appendix B. Descriptions of soil and field screening results for potholes PH01 and PH02 were logged on lithologic/soil sampling logs, which are included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they were collected may not have equilibrated to 6 degrees Celsius required for shipment and long-term storage but are considered to have been received in acceptable condition by the laboratory.

Laboratory analytical results for delineation samples SS01 through SS04 indicated concentrations of all COCs were in compliance with the Site Closure Criteria and reclamation requirement (strictest Closure

Criteria), confirming the lateral extent of the release. Laboratory analytical results for pothole PH01 indicated the aggregate of TPH-GRO and TPH-DRO exceeded the Closure Criteria at 0.5 feet bgs but was in compliance with the Closure Criteria and the strictest Closure Criteria in the sample collected at 1-foot bgs, confirming the vertical extent of the release. All COC concentrations in soil samples collected from pothole PH02 were in compliance with the Closure Criteria and the sample collected at 1-foot bgs was compliant with the strictest Closure Criteria. Based on the presence of impacted soil in pothole PH01, excavation activities appeared to be warranted.

EXCAVATION ACTIVITIES

On July 6, 2023, Ensolum personnel returned to the Site to oversee excavation of impacted soil in the vicinity of pothole PH01. TPH-impacted soil was excavated from the release area utilizing a backhoe and transport vehicles. To direct excavation activities, soil was field screened for VOCs and chloride. The final excavation extended to 1-foot bgs.

Following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil sample FS01 was collected from the floor of the excavation at a depth of 1-foot bgs and confirmation soil sample SW01 was collected from the sidewalls of the excavation at depths ranging from the ground surface to 1-foot bgs. All excavation confirmation soil samples collected were handled and analyzed following the same procedures as described above. The excavation extent and excavation confirmation soil sample locations are presented on Figure 3. Photographic documentation of the excavation is included in Appendix B.

Laboratory analytical results indicated all COC concentrations in soil samples FS01 and SW01 were in compliance with the Closure Criteria.

The final excavation extent measured approximately 165 square feet. A total of approximately 7 cubic yards of impacted soil was removed during excavation activities. The impacted soil was transported and properly disposed of at R360 Landfill Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation area was secured with fencing. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Appendix D. Notification of sampling events are included in Appendix E.

CLOSURE REQUEST

Site assessment, delineation, and excavation activities were conducted at the Site to address April 2023 release of crude oil. Laboratory analytical results for all excavation soil samples collected from the final excavation extent and delineation activities indicated all COC concentrations were compliant with the Site Closure Criteria and/or reclamation requirement. Based on laboratory analytical results, no further remediation was required. XTO will backfill the excavation with caliche material and recontour the Site to match pre-existing Site conditions.

Excavation of soil has mitigated impacts at this Site. Depth to groundwater is confirmed to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2310044397.

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

Sincerely,
Ensolum, LLC

Daniel R. Moir, PG
Senior Managing Geologist

Ashley L. Ager, MS, PG
Principal

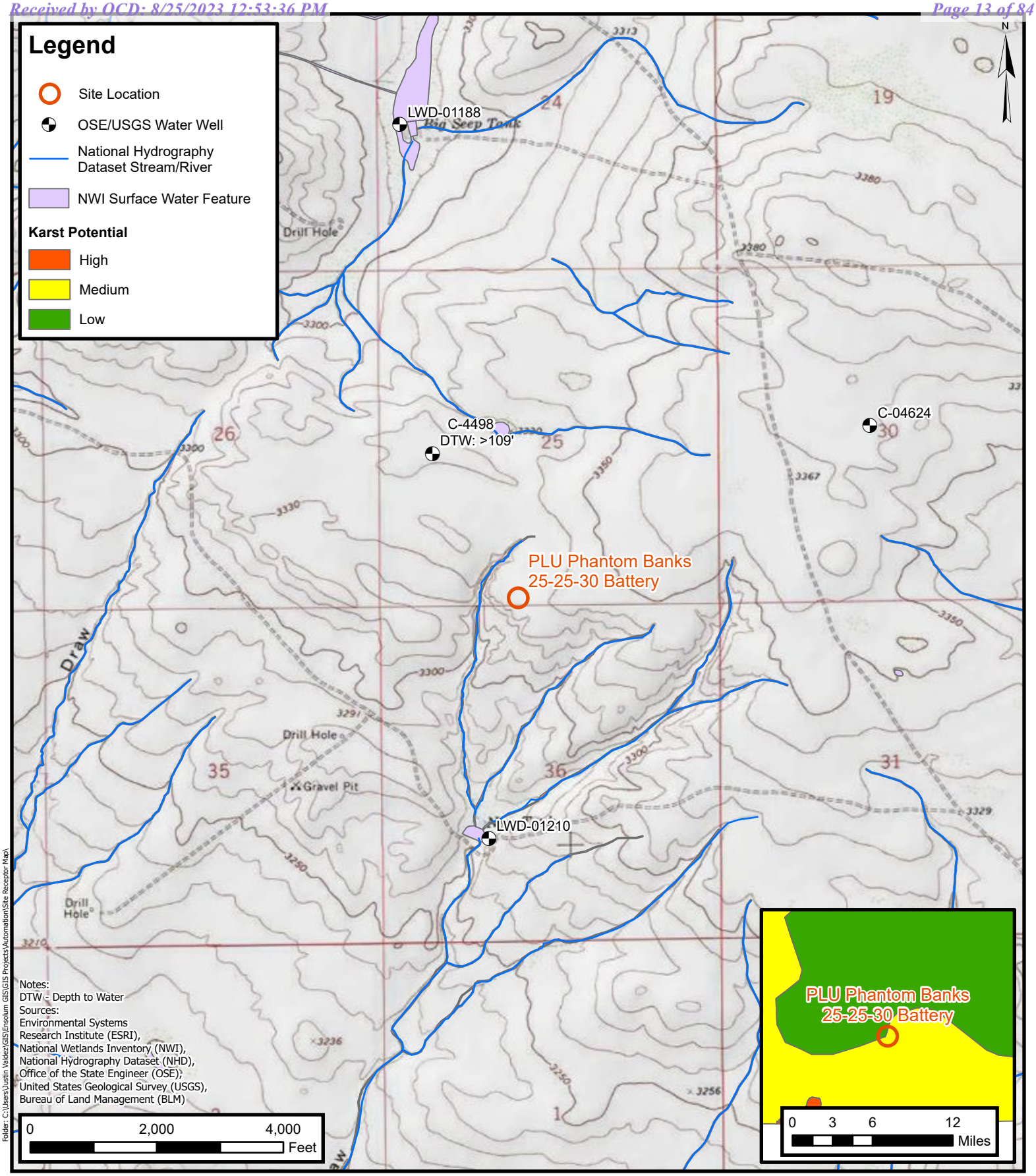
cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithology Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications/Correspondence

ENSOLUM

FIGURES



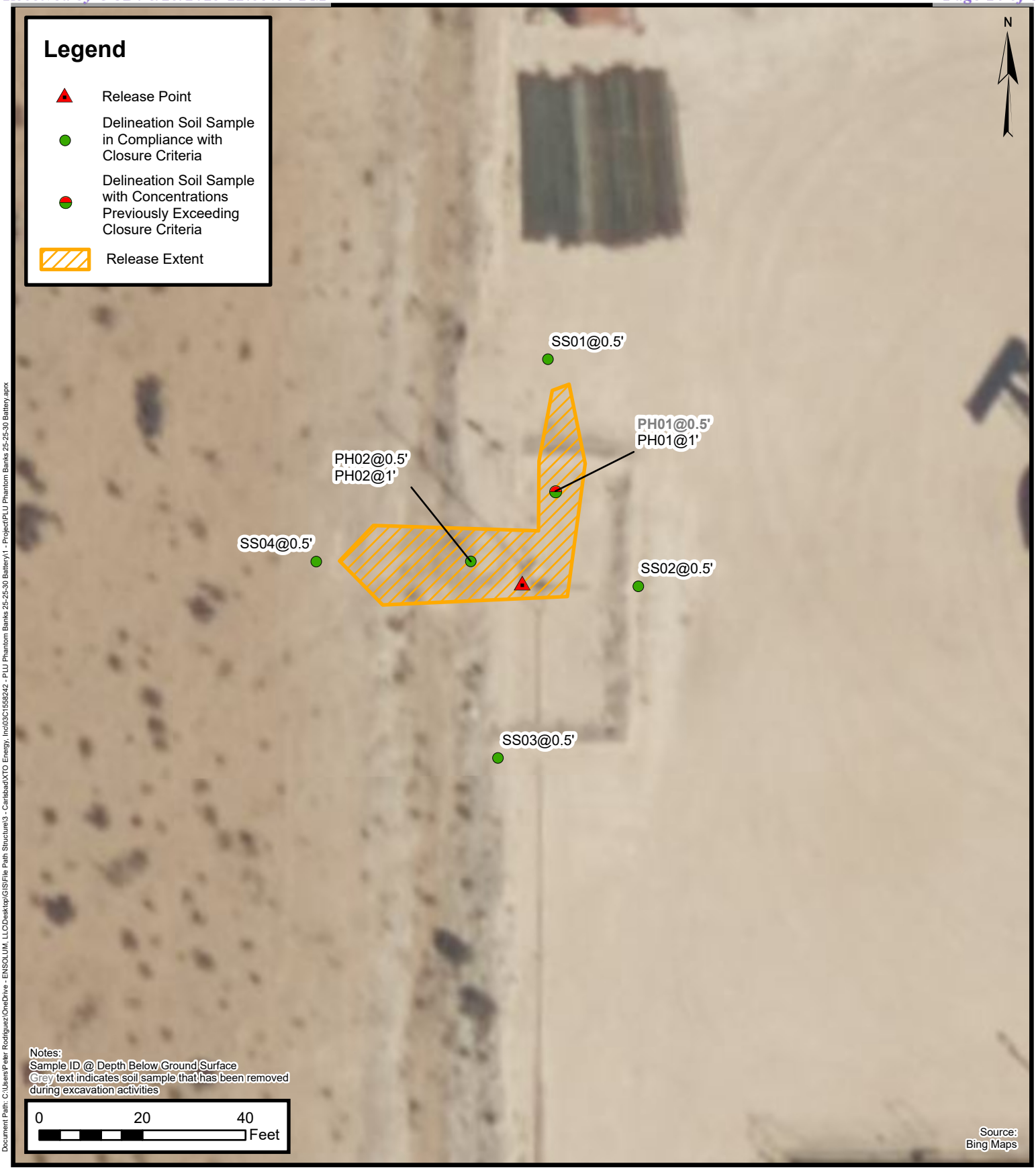
Folder: C:\Users\Justin Valdez\GIS\Ensolum GIS\GIS Projects\Automation\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
PLU Phantom Banks 25-25-30 Battery
Incident Number: nAPP2310044397
Unit N, Sec 25, T25S, R30E
Eddy County, New Mexico

FIGURE 1



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Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
PLU Phantom Banks 25-25-30 Battery
Incident Number: NAPP2310044397
Unit N Sec 25 T25S R30E
Eddy County, New Mexico

FIGURE
2

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
PLU Phantom Banks 25-25-30 Battery
Incident Number: NAPP2310044397
Unit N Sec 25 T25S R30E
Eddy County, New Mexico

FIGURE
3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Phantom Banks 25-25-30 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 I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
SS01	06/05/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	234
SS02	06/05/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	187
SS03	06/05/2023	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	170
SS04	06/05/2023	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	32.9
~~PH01~~	~~06/05/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.9~~	~~1,960~~	~~<49.9~~	~~**1,960**~~	~~1,960~~	~~115~~
PH01A	06/05/2023	1	<0.00198	0.0407	<49.9	428	<49.9	428	428	173
PH02	06/05/2023	0.5	<0.00201	0.0116	<50.0	896	<50.0	896	896	38.1
PH02A	06/05/2023	1	<0.00200	<0.00401	<49.9	78.8	<49.9	78.8	78.8	42.2
Excavation Soil Samples										
FS01	07/06/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	163
SW01	07/06/2023	0 - 1	<0.00198	<0.00396	<49.8	844	<49.8	844	844	90.4

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during excavation activities

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4498

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	6'	1.96"	N
	LONGITUDE	-103°	50'	26.19"	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NW SW NE Sec. 25 T25S R30E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
02/24/2021	02/24/2021	temporary well material	109	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	109	±6.5	Boring- HSA	--	--	--	--
					OSE DII MAR 11 2021 PM4:26		

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4498	POD NO. 1	TRN NO. 682528	
LOCATION 132 T25S R30E Sec 25		WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC ~~LOG~~ OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	34	34	Caliche, tan, no odor, no stain, gravel, dry	Y ✓ N	
34	40	6	sand/ cacliche, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
40	56	16	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
56	72	16	sandstone, low consolidation, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
72	79	7	sand, tan, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
79	109	30	sandstone, low - medium consolidation, tan, no odor, m-f grained, well sorted, m	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

~~METHOD~~ USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.

OSE DII MAR 11 2021 PM4:28

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 03/11/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4498	POD NO. 1	TRN NO. 682528	
LOCATION 132 T25S R30E Sec25		WELL TAG ID NO. NA	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 682528
File Nbr: C 04498
Well File Nbr: C 04498 POD1

Mar. 11, 2021

TACOMA MORRISEY
WSP USA
3300 NORTH A STREET
BLDG 1 #222
MIDLAND, TX 79705

Greetings:

The above numbered permit was issued in your name on 12/01/2020.

The Well Record was received in this office on 03/11/2021, stating that it had been completed on 02/24/2021, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 12/01/2021.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis
(575)622-6521

drywell

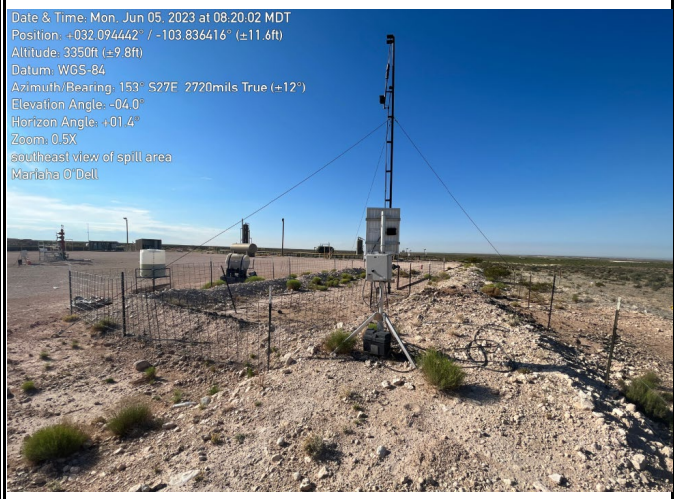
ENSOLUM

APPENDIX B

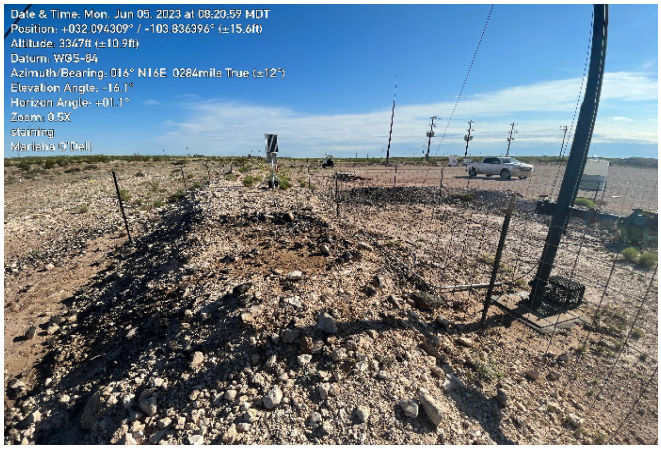
Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
PLU Phantom Banks 25-25-30 Battery
Incident Number NAPP2310044397



Photograph 1 Date: June 5, 2023
Description: Flare and stained soil north and west of the flare
View: South



Photograph 2 Date: June 5, 2023
Description: Flare and stained soil north and west of the flare
View: North

Photograph 3 Date: July 6, 2023
Description: Excavation in the vicinity of pothole PH01
View: Northeast

Photograph 4 Date: July 6, 2023
Description: Another view of excavation
View: Northwest

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM	Sample Name: PH01	Date: 6/5/2023
	Site Name: PLU Phantom Banks 25-25-30 Battery	
	Incident Number: NAPP2310044397	
	Job Number: 03C1558242	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MO	Method: backhoe
Coordinates:	Hole Diameter:	Total Depth: 1 foot

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
dry	<174	0	n	PH01	0.5'	0	cche	caliche, fg-cg sand, gravel, grayish-brown, dry, no staining or odor
dry	<174	0	n	PH01A	1'	1		TD - 1 foot bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM	Sample Name: PH02	Date: 6/5/2023
	Site Name: PLU Phantom Banks 25-25-30 Battery	
	Incident Number: NAPP2310044397	
	Job Number: 03C1558242	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MO	Method: backhoe
Coordinates:	Hole Diameter:	Total Depth: 1 foot

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
dry	<174	0	n	PH02	0.5'	0	SP	Sand, vf-fg sand, brown, dry, no odor or staining
dry	<174	0	n	PH02A	1'	1		TD - 1 foot bgs
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/12/2023 3:15:08 PM

JOB DESCRIPTION

PLU Phantom Banks 25-25-30 Battery
SDG NUMBER 03C1558242

JOB NUMBER

890-4780-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

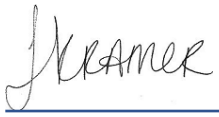
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



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6/12/2023 3:15:08 PM

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

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Laboratory Job ID: 890-4780-1
SDG: 03C1558242

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
S1-	Surrogate recovery exceeds control limits, low 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: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Job ID: 890-4780-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4780-1

Receipt
The samples were received on 6/5/2023 4:39 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 5.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-4780-1), PH01A (890-4780-2), PH02 (890-4780-3), PH02A (890-4780-4), SS01 (890-4780-5), SS02 (890-4780-6), SS03 (890-4780-7) and SS04 (890-4780-8).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-55034 and analytical batch 880-55086 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-55034/2-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.

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-55008 and analytical batch 880-55080 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: PH01 (890-4780-1). 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: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: PH01

Date Collected: 06/05/23 09:20
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 09:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 09:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 09:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/08/23 12:22	06/10/23 09:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 09:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/08/23 12:22	06/10/23 09:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*06/08/23 12:22*	*06/10/23 09:39*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*06/08/23 12:22*	*06/10/23 09:39*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1960**		49.9		mg/Kg			06/09/23 16:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 13:18	1
Diesel Range Organics (Over C10-C28)	**1960**	***-**	49.9		mg/Kg		06/08/23 08:45	06/09/23 13:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 13:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*06/08/23 08:45*	*06/09/23 13:18*	*1*
o-Terphenyl	*3*	*S1-*	*70 - 130*	*06/08/23 08:45*	*06/09/23 13:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**115**		5.00		mg/Kg			06/07/23 16:39	1

Client Sample ID: PH01A

Date Collected: 06/05/23 10:15
Date Received: 06/05/23 16:39
Sample Depth: 1'

Lab Sample ID: 890-4780-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		06/08/23 12:22	06/10/23 10:00	1
Toluene	<0.00198	U	0.00198		mg/Kg		06/08/23 12:22	06/10/23 10:00	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/08/23 12:22	06/10/23 10:00	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/08/23 12:22	06/10/23 10:00	1
o-Xylene	**0.0407**		0.00198		mg/Kg		06/08/23 12:22	06/10/23 10:00	1
Xylenes, Total	**0.0407**		0.00396		mg/Kg		06/08/23 12:22	06/10/23 10:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/08/23 12:22*	*06/10/23 10:00*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: PH01A

Date Collected: 06/05/23 10:15
Date Received: 06/05/23 16:39
Sample Depth: 1'

Lab Sample ID: 890-4780-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*06/08/23 12:22*	*06/10/23 10:00*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0407**		0.00396		mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**428**		49.9		mg/Kg			06/09/23 16:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 13:39	1
Diesel Range Organics (Over C10-C28)	**428**	***-**	49.9		mg/Kg		06/08/23 08:45	06/09/23 13:39	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*06/08/23 08:45*	*06/09/23 13:39*	*1*
o-Terphenyl	*88*		*70 - 130*	*06/08/23 08:45*	*06/09/23 13:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**173**		5.01		mg/Kg			06/07/23 16:44	1

Client Sample ID: PH02

Date Collected: 06/05/23 09:25
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		06/08/23 12:22	06/10/23 10:20	1
Toluene	**0.00205**		0.00201		mg/Kg		06/08/23 12:22	06/10/23 10:20	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/08/23 12:22	06/10/23 10:20	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/08/23 12:22	06/10/23 10:20	1
o-Xylene	**0.00958**		0.00201		mg/Kg		06/08/23 12:22	06/10/23 10:20	1
Xylenes, Total	**0.00958**		0.00402		mg/Kg		06/08/23 12:22	06/10/23 10:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*06/08/23 12:22*	*06/10/23 10:20*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/08/23 12:22*	*06/10/23 10:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0116**		0.00402		mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**896**		50.0		mg/Kg			06/09/23 16:20	1

Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: PH02

Date Collected: 06/05/23 09:25
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/08/23 08:45	06/09/23 14:01	1
Diesel Range Organics (Over C10-C28)	**896**	*-	50.0		mg/Kg		06/08/23 08:45	06/09/23 14:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/08/23 08:45	06/09/23 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*06/08/23 08:45*	*06/09/23 14:01*	*1*
o-Terphenyl	*89*		*70 - 130*	*06/08/23 08:45*	*06/09/23 14:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.1**		5.04		mg/Kg			06/07/23 16:50	1

Client Sample ID: PH02A

Date Collected: 06/05/23 10:20
Date Received: 06/05/23 16:39
Sample Depth: 1'

Lab Sample ID: 890-4780-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 10:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 10:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 10:41	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/08/23 12:22	06/10/23 10:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 10:41	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/08/23 12:22	06/10/23 10:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*06/08/23 12:22*	*06/10/23 10:41*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*06/08/23 12:22*	*06/10/23 10:41*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**78.8**		49.9		mg/Kg			06/09/23 16:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 14:22	1
Diesel Range Organics (Over C10-C28)	**78.8**	*-	49.9		mg/Kg		06/08/23 08:45	06/09/23 14:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/08/23 08:45*	*06/09/23 14:22*	*1*
o-Terphenyl	*100*		*70 - 130*	*06/08/23 08:45*	*06/09/23 14:22*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: PH02A

Lab Sample ID: 890-4780-4
Matrix: Solid
Date Collected: 06/05/23 10:20
Date Received: 06/05/23 16:39
Sample Depth: 1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.2		4.98		mg/Kg			06/07/23 16:55	1

Client Sample ID: SS01

Lab Sample ID: 890-4780-5
Matrix: Solid
Date Collected: 06/05/23 10:35
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		06/08/23 12:22	06/10/23 11:01	1
Toluene	<0.00198	U	0.00198		mg/Kg		06/08/23 12:22	06/10/23 11:01	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/08/23 12:22	06/10/23 11:01	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/08/23 12:22	06/10/23 11:01	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/08/23 12:22	06/10/23 11:01	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		06/08/23 12:22	06/10/23 11:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*06/08/23 12:22*	*06/10/23 11:01*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*06/08/23 12:22*	*06/10/23 11:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			06/09/23 16:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 14:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U *-	49.9		mg/Kg		06/08/23 08:45	06/09/23 14:44	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*06/08/23 08:45*	*06/09/23 14:44*	*1*
o-Terphenyl	*90*		*70 - 130*	*06/08/23 08:45*	*06/09/23 14:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	234		5.02		mg/Kg			06/07/23 17:12	1

Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: SS02

Date Collected: 06/05/23 11:30
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 11:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 11:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 11:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/08/23 12:22	06/10/23 11:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/08/23 12:22	06/10/23 11:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/08/23 12:22	06/10/23 11:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*06/08/23 12:22*	*06/10/23 11:22*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*06/08/23 12:22*	*06/10/23 11:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			06/12/23 13:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 15:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U *-	49.9		mg/Kg		06/08/23 08:45	06/09/23 15:29	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*06/08/23 08:45*	*06/09/23 15:29*	*1*
o-Terphenyl	*88*		*70 - 130*	*06/08/23 08:45*	*06/09/23 15:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**187**		4.95		mg/Kg			06/07/23 17:17	1

Client Sample ID: SS03

Date Collected: 06/05/23 10:55
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 11:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 11:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 11:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/08/23 12:22	06/10/23 11:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 11:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/08/23 12:22	06/10/23 11:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*06/08/23 12:22*	*06/10/23 11:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: SS03

Date Collected: 06/05/23 10:55
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-7
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*06/08/23 12:22*	*06/10/23 11:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/12/23 13:36	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/08/23 08:45	06/09/23 15:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U *-	50.0	mg/Kg		06/08/23 08:45	06/09/23 15:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/08/23 08:45	06/09/23 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*87*		*70 - 130*	*06/08/23 08:45*	*06/09/23 15:51*	*1*
o-Terphenyl	*89*		*70 - 130*	*06/08/23 08:45*	*06/09/23 15:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**170**		4.96	mg/Kg			06/07/23 17:33	1

Client Sample ID: SS04

Date Collected: 06/05/23 11:05
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		06/08/23 12:22	06/10/23 13:05	1
Toluene	<0.00201	U	0.00201	mg/Kg		06/08/23 12:22	06/10/23 13:05	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		06/08/23 12:22	06/10/23 13:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		06/08/23 12:22	06/10/23 13:05	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		06/08/23 12:22	06/10/23 13:05	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		06/08/23 12:22	06/10/23 13:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*06/08/23 12:22*	*06/10/23 13:05*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*06/08/23 12:22*	*06/10/23 13:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			06/10/23 18:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			06/12/23 13:36	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: SS04
Date Collected: 06/05/23 11:05
Date Received: 06/05/23 16:39
Sample Depth: 0.5'

Lab Sample ID: 890-4780-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/08/23 08:45	06/09/23 16:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U *-	50.0		mg/Kg		06/08/23 08:45	06/09/23 16:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/08/23 08:45	06/09/23 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*06/08/23 08:45*	*06/09/23 16:13*	*1*
o-Terphenyl	*87*		*70 - 130*	*06/08/23 08:45*	*06/09/23 16:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.9**		5.00		mg/Kg			06/07/23 17:39	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-29060-A-8-C MS	Matrix Spike	86	113
880-29060-A-8-D MSD	Matrix Spike Duplicate	110	102
890-4780-1	PH01	99	111
890-4780-2	PH01A	102	92
890-4780-3	PH02	79	94
890-4780-4	PH02A	92	80
890-4780-5	SS01	98	72
890-4780-6	SS02	95	78
890-4780-7	SS03	90	73
890-4780-8	SS04	92	81
LCS 880-55034/1-A	Lab Control Sample	100	114
LCSD 880-55034/2-A	Lab Control Sample Dup	66 S1-	109
MB 880-54980/5-A	Method Blank	73	94
MB 880-55034/5-A	Method Blank	76	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4780-1	PH01	85	3 S1-
890-4780-2	PH01A	87	88
890-4780-3	PH02	90	89
890-4780-4	PH02A	97	100
890-4780-5	SS01	87	90
890-4780-6	SS02	86	88
890-4780-7	SS03	87	89
890-4780-8	SS04	85	87
890-4783-A-11-E MS	Matrix Spike	99	96
890-4783-A-11-F MSD	Matrix Spike Duplicate	100	94
LCS 880-55008/2-A	Lab Control Sample	88	85
LCSD 880-55008/3-A	Lab Control Sample Dup	87	85
MB 880-55008/1-A	Method Blank	113	120

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-54980/5-A
Matrix: Solid
Analysis Batch: 55086

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54980

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/07/23 13:56	06/09/23 21:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/07/23 13:56	06/09/23 21:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/07/23 13:56	06/09/23 21:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/07/23 13:56	06/09/23 21:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/07/23 13:56	06/09/23 21:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/07/23 13:56	06/09/23 21:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*06/07/23 13:56*	*06/09/23 21:41*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/07/23 13:56*	*06/09/23 21:41*	*1*

Lab Sample ID: MB 880-55034/5-A
Matrix: Solid
Analysis Batch: 55086

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55034

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 08:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 08:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 08:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/08/23 12:22	06/10/23 08:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/08/23 12:22	06/10/23 08:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/08/23 12:22	06/10/23 08:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*06/08/23 12:22*	*06/10/23 08:16*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/08/23 12:22*	*06/10/23 08:16*	*1*

Lab Sample ID: LCS 880-55034/1-A
Matrix: Solid
Analysis Batch: 55086

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55034

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1259		mg/Kg		126	70 - 130		
Toluene			0.100	0.09996		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.09424		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1846		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09812		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: LCSD 880-55034/2-A
Matrix: Solid
Analysis Batch: 55086

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55034

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1283		mg/Kg		128	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

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

Lab Sample ID: LCSD 880-55034/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55086 — **Prep Batch: 55034**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09461		mg/Kg		95	70 - 130	5	35
Ethylbenzene			0.100	0.08192		mg/Kg		82	70 - 130	14	35
m-Xylene & p-Xylene			0.200	0.1503		mg/Kg		75	70 - 130	21	35
o-Xylene			0.100	0.07379		mg/Kg		74	70 - 130	28	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 880-29060-A-8-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55086 — **Prep Batch: 55034**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U F1	0.101	0.1356	F1	mg/Kg		134	70 - 130
Toluene	<0.00198	U	0.101	0.1031		mg/Kg		102	70 - 130
Ethylbenzene	<0.00198	U	0.101	0.08981		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.202	0.1747		mg/Kg		86	70 - 130
o-Xylene	<0.00198	U	0.101	0.08688		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-29060-A-8-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55086 — **Prep Batch: 55034**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U F1	0.0994	0.1273		mg/Kg		128	70 - 130	6	35
Toluene	<0.00198	U	0.0994	0.1097		mg/Kg		110	70 - 130	6	35
Ethylbenzene	<0.00198	U	0.0994	0.1087		mg/Kg		109	70 - 130	19	35
m-Xylene & p-Xylene	<0.00396	U	0.199	0.2205		mg/Kg		111	70 - 130	23	35
o-Xylene	<0.00198	U	0.0994	0.1103		mg/Kg		111	70 - 130	24	35

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

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

Lab Sample ID: MB 880-55008/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55080 — **Prep Batch: 55008**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 07:48	1

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

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

Lab Sample ID: MB 880-55008/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55080 — **Prep Batch: 55008**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 07:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 08:45	06/09/23 07:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*06/08/23 08:45*	*06/09/23 07:48*	*1*
o-Terphenyl	*120*		*70 - 130*	*06/08/23 08:45*	*06/09/23 07:48*	*1*

Lab Sample ID: LCS 880-55008/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55080 — **Prep Batch: 55008**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	754.3		mg/Kg		75	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	673.4	*-	mg/Kg		67	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: LCSD 880-55008/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55080 — **Prep Batch: 55008**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			999	752.3		mg/Kg		75	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			999	698.5		mg/Kg		70	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: 890-4783-A-11-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55080 — **Prep Batch: 55008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	829.8		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U *-	998	770.3		mg/Kg		75	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

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

Lab Sample ID: 890-4783-A-11-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55080 — **Prep Batch: 55008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	857.0		mg/Kg		86	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U *-	998	762.7		mg/Kg		74	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-54867/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54985

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/07/23 15:06	1

Lab Sample ID: LCS 880-54867/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54985

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.1		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-54867/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54985

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	259.0		mg/Kg		104	90 - 110	3	20

Lab Sample ID: 890-4780-4 MS — **Client Sample ID: PH02A**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	42.2		249	293.6		mg/Kg		101	90 - 110		

Lab Sample ID: 890-4780-4 MSD — **Client Sample ID: PH02A**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	42.2		249	294.6		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

GC VOA

Prep Batch: 54980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-54980/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 55034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Total/NA	Solid	5035	
890-4780-2	PH01A	Total/NA	Solid	5035	
890-4780-3	PH02	Total/NA	Solid	5035	
890-4780-4	PH02A	Total/NA	Solid	5035	
890-4780-5	SS01	Total/NA	Solid	5035	
890-4780-6	SS02	Total/NA	Solid	5035	
890-4780-7	SS03	Total/NA	Solid	5035	
890-4780-8	SS04	Total/NA	Solid	5035	
MB 880-55034/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55034/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55034/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-29060-A-8-C MS	Matrix Spike	Total/NA	Solid	5035	
880-29060-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Total/NA	Solid	8021B	55034
890-4780-2	PH01A	Total/NA	Solid	8021B	55034
890-4780-3	PH02	Total/NA	Solid	8021B	55034
890-4780-4	PH02A	Total/NA	Solid	8021B	55034
890-4780-5	SS01	Total/NA	Solid	8021B	55034
890-4780-6	SS02	Total/NA	Solid	8021B	55034
890-4780-7	SS03	Total/NA	Solid	8021B	55034
890-4780-8	SS04	Total/NA	Solid	8021B	55034
MB 880-54980/5-A	Method Blank	Total/NA	Solid	8021B	54980
MB 880-55034/5-A	Method Blank	Total/NA	Solid	8021B	55034
LCS 880-55034/1-A	Lab Control Sample	Total/NA	Solid	8021B	55034
LCSD 880-55034/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55034
880-29060-A-8-C MS	Matrix Spike	Total/NA	Solid	8021B	55034
880-29060-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55034

Analysis Batch: 55219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Total/NA	Solid	Total BTEX	
890-4780-2	PH01A	Total/NA	Solid	Total BTEX	
890-4780-3	PH02	Total/NA	Solid	Total BTEX	
890-4780-4	PH02A	Total/NA	Solid	Total BTEX	
890-4780-5	SS01	Total/NA	Solid	Total BTEX	
890-4780-6	SS02	Total/NA	Solid	Total BTEX	
890-4780-7	SS03	Total/NA	Solid	Total BTEX	
890-4780-8	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 55008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

GC Semi VOA (Continued)

Prep Batch: 55008 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-2	PH01A	Total/NA	Solid	8015NM Prep	
890-4780-3	PH02	Total/NA	Solid	8015NM Prep	
890-4780-4	PH02A	Total/NA	Solid	8015NM Prep	
890-4780-5	SS01	Total/NA	Solid	8015NM Prep	
890-4780-6	SS02	Total/NA	Solid	8015NM Prep	
890-4780-7	SS03	Total/NA	Solid	8015NM Prep	
890-4780-8	SS04	Total/NA	Solid	8015NM Prep	
MB 880-55008/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55008/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55008/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4783-A-11-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4783-A-11-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Total/NA	Solid	8015B NM	55008
890-4780-2	PH01A	Total/NA	Solid	8015B NM	55008
890-4780-3	PH02	Total/NA	Solid	8015B NM	55008
890-4780-4	PH02A	Total/NA	Solid	8015B NM	55008
890-4780-5	SS01	Total/NA	Solid	8015B NM	55008
890-4780-6	SS02	Total/NA	Solid	8015B NM	55008
890-4780-7	SS03	Total/NA	Solid	8015B NM	55008
890-4780-8	SS04	Total/NA	Solid	8015B NM	55008
MB 880-55008/1-A	Method Blank	Total/NA	Solid	8015B NM	55008
LCS 880-55008/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55008
LCSD 880-55008/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55008
890-4783-A-11-E MS	Matrix Spike	Total/NA	Solid	8015B NM	55008
890-4783-A-11-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55008

Analysis Batch: 55173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Total/NA	Solid	8015 NM	
890-4780-2	PH01A	Total/NA	Solid	8015 NM	
890-4780-3	PH02	Total/NA	Solid	8015 NM	
890-4780-4	PH02A	Total/NA	Solid	8015 NM	
890-4780-5	SS01	Total/NA	Solid	8015 NM	
890-4780-6	SS02	Total/NA	Solid	8015 NM	
890-4780-7	SS03	Total/NA	Solid	8015 NM	
890-4780-8	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 54867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Soluble	Solid	DI Leach	
890-4780-2	PH01A	Soluble	Solid	DI Leach	
890-4780-3	PH02	Soluble	Solid	DI Leach	
890-4780-4	PH02A	Soluble	Solid	DI Leach	
890-4780-5	SS01	Soluble	Solid	DI Leach	
890-4780-6	SS02	Soluble	Solid	DI Leach	
890-4780-7	SS03	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

HPLC/IC (Continued)

Leach Batch: 54867 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-8	SS04	Soluble	Solid	DI Leach	
MB 880-54867/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-54867/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-54867/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4780-4 MS	PH02A	Soluble	Solid	DI Leach	
890-4780-4 MSD	PH02A	Soluble	Solid	DI Leach	

Analysis Batch: 54985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4780-1	PH01	Soluble	Solid	300.0	54867
890-4780-2	PH01A	Soluble	Solid	300.0	54867
890-4780-3	PH02	Soluble	Solid	300.0	54867
890-4780-4	PH02A	Soluble	Solid	300.0	54867
890-4780-5	SS01	Soluble	Solid	300.0	54867
890-4780-6	SS02	Soluble	Solid	300.0	54867
890-4780-7	SS03	Soluble	Solid	300.0	54867
890-4780-8	SS04	Soluble	Solid	300.0	54867
MB 880-54867/1-A	Method Blank	Soluble	Solid	300.0	54867
LCS 880-54867/2-A	Lab Control Sample	Soluble	Solid	300.0	54867
LCSD 880-54867/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	54867
890-4780-4 MS	PH02A	Soluble	Solid	300.0	54867
890-4780-4 MSD	PH02A	Soluble	Solid	300.0	54867

Lab Chronicle

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: PH01

Date Collected: 06/05/23 09:20
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 09:39	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55173	06/09/23 16:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 13:18	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 16:39	CH	EET MID

Client Sample ID: PH01A

Date Collected: 06/05/23 10:15
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 10:00	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55173	06/09/23 16:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 13:39	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 16:44	CH	EET MID

Client Sample ID: PH02

Date Collected: 06/05/23 09:25
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-3
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			4.97 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 10:20	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55173	06/09/23 16:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 14:01	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 16:50	CH	EET MID

Client Sample ID: PH02A

Date Collected: 06/05/23 10:20
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-4
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			4.99 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 10:41	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Client Sample ID: PH02A
Date Collected: 06/05/23 10:20
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-4
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			55173	06/09/23 16:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 14:22	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 16:55	CH	EET MID

Client Sample ID: SS01
Date Collected: 06/05/23 10:35
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 11:01	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55173	06/09/23 16:20	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 14:44	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 17:12	CH	EET MID

Client Sample ID: SS02
Date Collected: 06/05/23 11:30
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 11:22	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55173	06/12/23 13:36	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 15:29	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 17:17	CH	EET MID

Client Sample ID: SS03
Date Collected: 06/05/23 10:55
Date Received: 06/05/23 16:39

Lab Sample ID: 890-4780-7
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			5.00 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 11:42	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55173	06/12/23 13:36	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 15:51	AJ	EET MID

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Lab Chronicle

Client: Ensolum
Job ID: 890-4780-1
Project/Site: PLU Phantom Banks 25-25-30 Battery
SDG: 03C1558242

Client Sample ID: SS03
Lab Sample ID: 890-4780-7
Date Collected: 06/05/23 10:55
Matrix: Solid
Date Received: 06/05/23 16:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 17:33	CH	EET MID

Client Sample ID: SS04
Lab Sample ID: 890-4780-8
Date Collected: 06/05/23 11:05
Matrix: Solid
Date Received: 06/05/23 16:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	55034	06/08/23 12:22	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55086	06/10/23 13:05	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55219	06/10/23 18:16	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55173	06/12/23 13:36	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55008	06/08/23 08:45	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55080	06/09/23 16:13	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	54867	06/07/23 10:52	KS	EET MID
Soluble	Analysis	300.0		1			54985	06/07/23 17:39	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 Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU Phantom Banks 25-25-30 Battery

Job ID: 890-4780-1
SDG: 03C1558242

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4780-1	PH01	Solid	06/05/23 09:20	06/05/23 16:39	0.5'
890-4780-2	PH01A	Solid	06/05/23 10:15	06/05/23 16:39	1'
890-4780-3	PH02	Solid	06/05/23 09:25	06/05/23 16:39	0.5'
890-4780-4	PH02A	Solid	06/05/23 10:20	06/05/23 16:39	1'
890-4780-5	SS01	Solid	06/05/23 10:35	06/05/23 16:39	0.5'
890-4780-6	SS02	Solid	06/05/23 11:30	06/05/23 16:39	0.5'
890-4780-7	SS03	Solid	06/05/23 10:55	06/05/23 16:39	0.5'
890-4780-8	SS04	Solid	06/05/23 11:05	06/05/23 16:39	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: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852 Email:	Email:	Garrett.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 Phantom Banks 25-25-30 Battery	Turn Around	☒ Routine ☐ Rush
Project Number:	03C1558242	Due Date:	5 days
Project Location:	32.09447 -103.836333	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Mariana O'Dell		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IAM 228
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.8
Total Containers:		Corrected Temperature:	5.6

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

ANALYSIS REQUEST — Parameters: Chlorides; TPH; BTEX

890-4780 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Chlorides	TPH	BTEX	Sample Comments
PH01	S	6/05/23	9:20	0.5'	G	1		X	X	X	Incident #:
PH01A			10:15	1'							nAPP2310044397
PH02			9:25	0.5'							
PH02A			20:20	1'							cost center:
SS01			10:35	0.5'							1140221001
SS02			11:30	0.5'							
SS03			10:55	0.5'							Ben Belill:
SS04			11:05	0.5'							bbelill@ensdum.com

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			2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4780-1
SDG Number: 03C1558242

Login Number: 4780
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4780-1
SDG Number: 03C1558242

Login Number: 4780
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/07/23 11:36 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/11/2023 5:23:35 PM

JOB DESCRIPTION

PLU Phantom Banks Battery 25-25-30
SDG NUMBER 03C1558242

JOB NUMBER

890-4904-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

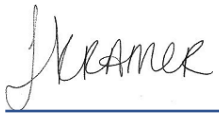
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



Generated
7/11/2023 5:23:35 PM

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

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Laboratory Job ID: 890-4904-1
SDG: 03C1558242

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4904-1
Project/Site: PLU Phantom Banks Battery 25-25-30 SDG: 03C1558242

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, 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: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

Job ID: 890-4904-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4904-1

Receipt
The samples were received on 7/6/2023 2:30 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 4.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4904-1) and SW01 (890-4904-2).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57254 recovered above the upper control limit for Benzene and Toluene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-57254/20).

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SW01 (890-4904-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

Client Sample ID: FS01

Lab Sample ID: 890-4904-1
Matrix: Solid
Date Collected: 07/06/23 10:10
Date Received: 07/06/23 14:30
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/10/23 09:14	07/10/23 14:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/10/23 09:14	07/10/23 14:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/10/23 09:14	07/10/23 14:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/10/23 09:14	07/10/23 14:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/10/23 09:14	07/10/23 14:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/10/23 09:14	07/10/23 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*07/10/23 09:14*	*07/10/23 14:32*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*07/10/23 09:14*	*07/10/23 14:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/11/23 12:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/11/23 18:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/11/23 10:04	07/11/23 16:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/11/23 10:04	07/11/23 16:56	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/11/23 10:04	07/11/23 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*07/11/23 10:04*	*07/11/23 16:56*	*1*
o-Terphenyl	*104*		*70 - 130*	*07/11/23 10:04*	*07/11/23 16:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**163**		5.02		mg/Kg			07/10/23 11:58	1

Client Sample ID: SW01

Lab Sample ID: 890-4904-2
Matrix: Solid
Date Collected: 07/06/23 10:15
Date Received: 07/06/23 14:30
Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/10/23 09:14	07/10/23 14:52	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/10/23 09:14	07/10/23 14:52	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/10/23 09:14	07/10/23 14:52	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/10/23 09:14	07/10/23 14:52	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/10/23 09:14	07/10/23 14:52	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/10/23 09:14	07/10/23 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/10/23 09:14*	*07/10/23 14:52*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

Client Sample ID: SW01

Date Collected: 07/06/23 10:15
Date Received: 07/06/23 14:30
Sample Depth: 0 - 1

Lab Sample ID: 890-4904-2

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*07/10/23 09:14*	*07/10/23 14:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/11/23 12:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**844**		49.8		mg/Kg			07/11/23 18:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/11/23 10:04	07/11/23 17:19	1
Diesel Range Organics (Over C10-C28)	**844**		49.8		mg/Kg		07/11/23 10:04	07/11/23 17:19	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/11/23 10:04	07/11/23 17:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*07/11/23 10:04*	*07/11/23 17:19*	*1*
o-Terphenyl	*111*		*70 - 130*	*07/11/23 10:04*	*07/11/23 17:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**90.4**		4.98		mg/Kg			07/10/23 12:14	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

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)
880-30481-A-2-B MS	Matrix Spike	108	104
880-30481-A-2-C MSD	Matrix Spike Duplicate	102	105
890-4904-1	FS01	119	106
890-4904-2	SW01	101	116
LCS 880-57268/1-A	Lab Control Sample	97	104
LCSD 880-57268/2-A	Lab Control Sample Dup	107	102
MB 880-57268/5-A	Method Blank	89	98

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)
890-4896-A-1-G MS	Matrix Spike	111	93
890-4896-A-1-H MSD	Matrix Spike Duplicate	118	95
890-4904-1	FS01	121	104
890-4904-2	SW01	138 S1+	111
LCS 880-57388/2-A	Lab Control Sample	96	88
LCSD 880-57388/3-A	Lab Control Sample Dup	104	95
MB 880-57388/1-A	Method Blank	121	110

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57268/5-A
Matrix: Solid
Analysis Batch: 57254

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57268

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/10/23 09:14	07/10/23 12:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/10/23 09:14	07/10/23 12:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/10/23 09:14	07/10/23 12:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/10/23 09:14	07/10/23 12:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/10/23 09:14	07/10/23 12:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/10/23 09:14	07/10/23 12:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/10/23 09:14*	*07/10/23 12:05*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/10/23 09:14*	*07/10/23 12:05*	*1*

Lab Sample ID: LCS 880-57268/1-A
Matrix: Solid
Analysis Batch: 57254

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57268

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1157		mg/Kg		116	70 - 130		
Toluene			0.100	0.1205		mg/Kg		120	70 - 130		
Ethylbenzene			0.100	0.1078		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2218		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1065		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-57268/2-A
Matrix: Solid
Analysis Batch: 57254

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57268

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09955		mg/Kg		100	70 - 130	15	35
Toluene			0.100	0.1145		mg/Kg		114	70 - 130	5	35
Ethylbenzene			0.100	0.1102		mg/Kg		110	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2350		mg/Kg		118	70 - 130	6	35
o-Xylene			0.100	0.1127		mg/Kg		113	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-30481-A-2-B MS
Matrix: Solid
Analysis Batch: 57254

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0994	0.1097		mg/Kg		110	70 - 130		
Toluene	<0.00202	U	0.0994	0.1205		mg/Kg		121	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

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

Lab Sample ID: 880-30481-A-2-B MS
Matrix: Solid
Analysis Batch: 57254

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0994	0.1136		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.2394		mg/Kg		120	70 - 130
o-Xylene	<0.00202	U	0.0994	0.1156		mg/Kg		116	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-30481-A-2-C MSD
Matrix: Solid
Analysis Batch: 57254

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0990	0.1108		mg/Kg		112	70 - 130	1	35
Toluene	<0.00202	U	0.0990	0.1178		mg/Kg		119	70 - 130	2	35
Ethylbenzene	<0.00202	U	0.0990	0.1080		mg/Kg		109	70 - 130	5	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.2235		mg/Kg		113	70 - 130	7	35
o-Xylene	<0.00202	U	0.0990	0.1070		mg/Kg		108	70 - 130	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-57388/1-A
Matrix: Solid
Analysis Batch: 57372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57388

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		07/11/23 10:04	07/11/23 10:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/11/23 10:04	07/11/23 10:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/11/23 10:04	07/11/23 10:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*07/11/23 10:04*	*07/11/23 10:21*	*1*
o-Terphenyl	*110*		*70 - 130*	*07/11/23 10:04*	*07/11/23 10:21*	*1*

Lab Sample ID: LCS 880-57388/2-A
Matrix: Solid
Analysis Batch: 57372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57388

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1062		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)			1000	912.9		mg/Kg		91	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

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

Lab Sample ID: LCS 880-57388/2-A
Matrix: Solid
Analysis Batch: 57372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57388

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: LCSD 880-57388/3-A
Matrix: Solid
Analysis Batch: 57372

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57388

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	976.2		mg/Kg		98	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	840.1		mg/Kg		84	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-4896-A-1-G MS
Matrix: Solid
Analysis Batch: 57372

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	865.7		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	999	1088		mg/Kg		106	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 890-4896-A-1-H MSD
Matrix: Solid
Analysis Batch: 57372

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57388

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	<49.8	U	999	915.8		mg/Kg		89	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.8	U	999	1132		mg/Kg		110	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	95		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57289/1-A
Matrix: Solid
Analysis Batch: 57316

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			07/10/23 11:12	1

Lab Sample ID: LCS 880-57289/2-A
Matrix: Solid
Analysis Batch: 57316

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.3		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-57289/3-A
Matrix: Solid
Analysis Batch: 57316

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 880-30481-A-1-D MS
Matrix: Solid
Analysis Batch: 57316

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	57.9		248	319.2		mg/Kg		105	90 - 110		

Lab Sample ID: 880-30481-A-1-E MSD
Matrix: Solid
Analysis Batch: 57316

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	57.9		248	319.7		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

GC VOA

Analysis Batch: 57254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Total/NA	Solid	8021B	57268
890-4904-2	SW01	Total/NA	Solid	8021B	57268
MB 880-57268/5-A	Method Blank	Total/NA	Solid	8021B	57268
LCS 880-57268/1-A	Lab Control Sample	Total/NA	Solid	8021B	57268
LCSD 880-57268/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57268
880-30481-A-2-B MS	Matrix Spike	Total/NA	Solid	8021B	57268
880-30481-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57268

Prep Batch: 57268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Total/NA	Solid	5035	
890-4904-2	SW01	Total/NA	Solid	5035	
MB 880-57268/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57268/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57268/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-30481-A-2-B MS	Matrix Spike	Total/NA	Solid	5035	
880-30481-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 57399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Total/NA	Solid	Total BTEX	
890-4904-2	SW01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 57372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Total/NA	Solid	8015B NM	57388
890-4904-2	SW01	Total/NA	Solid	8015B NM	57388
MB 880-57388/1-A	Method Blank	Total/NA	Solid	8015B NM	57388
LCS 880-57388/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57388
LCSD 880-57388/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57388
890-4896-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	57388
890-4896-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	57388

Prep Batch: 57388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Total/NA	Solid	8015NM Prep	
890-4904-2	SW01	Total/NA	Solid	8015NM Prep	
MB 880-57388/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57388/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57388/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4896-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4896-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 57437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Total/NA	Solid	8015 NM	
890-4904-2	SW01	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

HPLC/IC

Leach Batch: 57289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Soluble	Solid	DI Leach	
890-4904-2	SW01	Soluble	Solid	DI Leach	
MB 880-57289/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57289/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57289/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-30481-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-30481-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 57316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4904-1	FS01	Soluble	Solid	300.0	57289
890-4904-2	SW01	Soluble	Solid	300.0	57289
MB 880-57289/1-A	Method Blank	Soluble	Solid	300.0	57289
LCS 880-57289/2-A	Lab Control Sample	Soluble	Solid	300.0	57289
LCSD 880-57289/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57289
880-30481-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	57289
880-30481-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	57289

Lab Chronicle

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

Client Sample ID: FS01

Date Collected: 07/06/23 10:10
Date Received: 07/06/23 14:30

Lab Sample ID: 890-4904-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	57268	07/10/23 09:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57254	07/10/23 14:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57399	07/11/23 12:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			57437	07/11/23 18:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	57388	07/11/23 10:04	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57372	07/11/23 16:56	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57289	07/10/23 09:50	KS	EET MID
Soluble	Analysis	300.0		1			57316	07/10/23 11:58	CH	EET MID

Client Sample ID: SW01

Date Collected: 07/06/23 10:15
Date Received: 07/06/23 14:30

Lab Sample ID: 890-4904-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	57268	07/10/23 09:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57254	07/10/23 14:52	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57399	07/11/23 12:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			57437	07/11/23 18:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	57388	07/11/23 10:04	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57372	07/11/23 17:19	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57289	07/10/23 09:50	KS	EET MID
Soluble	Analysis	300.0		1			57316	07/10/23 12:14	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 Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

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	T104704400-23-26	06-30-24

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 Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU Phantom Banks Battery 25-25-30

Job ID: 890-4904-1
SDG: 03C1558242

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4904-1	FS01	Solid	07/06/23 10:10	07/06/23 14:30	1
890-4904-2	SW01	Solid	07/06/23 10:15	07/06/23 14:30	0 - 1

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	Garrett.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 Phantom Banks 23 25 30 Battery	Turn Around	
Project Number:	03C1558242	☒ Routine ☐ Rush	
Project Location:	32.09447 -103.83633	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR#07
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	TPH	Chlorides
FS01	S	7/6/23	10:10	1'	C	1		X	X	X
SW01	S	7/6/23	10:15	0-1'	C	1		X	X	X

890-4904 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 #:
nAPP2310044397

Cost center:
1140221001

Ben Belill:
bbelill@ensolum.com

NO

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.6.23 1430	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4904-1
SDG Number: 03C1558242

Login Number: 4904
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4904-1
SDG Number: 03C1558242

Login Number: 4904
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/10/23 08:30 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

From: Hamlet, Robert, EMNRD
To: Collins, Melanie
Cc: Ben Belill; Tacoma Morrissey; Green, Garrett J; DelawareSpills /SM; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD
Subject: (Extension Approval) - XTO - PLU Phantom Banks 25-25-30 Battery - Incident Number NAPP2310044397
Date: Wednesday, June 28, 2023 9:45:35 AM
Attachments: image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2310044397**

Melanie,

Your request for an extension to **August 29th, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Tuesday, June 27, 2023 1:11 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Cc: bbelill@ensolum.com; Tacoma Morrissey <tmorrissey@ensolum.com>; Green, Garrett J <garrett.green@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: [EXTERNAL] XTO - Extension Request - PLU Phantom Banks 25-25-30 Battery - Incident Number NAPP2310044397

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

All,

XTO is requesting an extension for the current deadline of June 30, 2023 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the PLU Phantom Banks 25-25-30 Battery (Incident Number NAPP2310044397). The release occurred on April 1, 2023,

and initial site assessment and delineation activities have been completed. Excavation activities are scheduled to be completed the week of July 3, 2023. In order to complete remediation efforts, review the laboratory analytical results, and submit a remediation work plan or closure report, XTO requests an extension until August 29, 2023.

Thank you,

Melanie Collins

XTO ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

Collins, Melanie

From: Collins, Melanie
Sent: Sunday, April 2, 2023 2:57 PM
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
Cc: Pennington, Shelby G; Green, Garrett J
Subject: 24-Hr notification Fire - PLU Phantom Banks 25-25-30 on 4/1/23

All,

This is notification of a fire that occurred yesterday at the PLU Phantom Banks 25-25-30 Battery near the coordinates listed below. No injuries were reported. Details will be provided with a Form C-141. Please reach out with questions or concerns.

(GPS 32.09396, -103.83606)

Thank you,

Melanie Collins

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Collins, Melanie
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
Cc: Green, Garrett J; Tacoma Morrissey; DelawareSpills /SM
Subject: XTO - Sampling Notification (Week of 6/5/23 - 6/9/23)
Date: Thursday, June 1, 2023 12:49:06 PM
Attachments: image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of June 5, 2023.

Monday
- PLU Phantom Banks 25-25-30 Battery / nAPP2310044397

Tuesday
- PLU Phantom Banks 25-25-30 Battery / nAPP2310044397
- PLU BS 15H / NAB1821157574

Wednesday
- James Ranch Unit 2 702H / nAPP2211654411
- Outrider Fed 28 501H / nAPP2306054654

Thursday
- Nash Deep East / nAPP2308136642

Friday
- Nash Deep East / nAPP2308136642

Thank you,

Melanie Collins
XTO ENERGY
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Collins, Melanie
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
Cc: Green, Garrett J; Ben Belill
Subject: XTO - Sampling Notification (Week of 7/3/23 - 7/7/23)
Date: Thursday, June 29, 2023 10:55:09 AM
Attachments: image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of July 3, 2023.

Thursday 7/6/23

- PLU Phantom Banks 25-25-30 Battery/ nAPP2310044397

Friday 7/7/23

- PLU Phantom Banks 25-25-30 Battery/ nAPP2310044397

Thank you,

Melanie Collins
XTO ENERGY
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

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 257836

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 257836
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2310044397 PLU PHANTOM BANKS 25-25-30 BATTERY, thank you. This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation including pictures of the contoured backfilled excavation surface and a thorough discussion on reseeding mixture, vegetation ratio, timelines, etc.., will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	1/23/2024