ENSOLUM

February 18, 2025

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

Re: Closure Request Addendum
PLU 16 Twin Wells Ranch 126H
Incident Number NAPP2233339417
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request Addendum* (*Addendum*) to document additional remediation and excavation soil sampling activities completed at the PLU 16 Twin Wells Ranch 126H (Site). This work was conducted in response to the denial of the original *Closure Request* submitted to New Mexico Oil Conservation Division (NMOCD) on March 8, 2023. In the denial, NMOCD indicated that the edge of the release extent needs to be accurately defined within 1-2 feet of the release. Based on additional excavation and soil sampling activities described below, XTO is submitting this *Addendum* and requesting no further action for Incident Number NAPP2233339417.

RELEASE BACKGROUND

The Site is located in Unit B, Section 21, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20795°, -103.78258°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On November 15, 2022, a low-pressure hose failed resulting in approximately 2.0 barrels (bbls) of produced water spraying onto a nearby light plant and the surface of the well pad. The light plant electrical panel shorted and caused a small fire to ignite. A fire extinguisher was used to extinguish the fire; 0.5 bbls of produced water were recovered. XTO immediately reported the release to the NMOCD via email on November 15, 2022, and submitted a Release Notification Form C-141 (Form C-141) on November 29, 2022. The release was assigned Incident Number NAPP2233339417.

As documented in the *Closure Request*, Ensolum personnel conducted Site assessment, soil sampling, and excavation activities in response to the November 15, 2022 release. On January 11, 2023, six delineation soil samples (SS01 through SS06) were collected within and around the release extent from a depth of approximately 0.5 feet below ground surface (bgs) to assess the lateral extent of the release. On February 2, 2023, Ensolum returned to the Site to oversee excavation and additional delineation activities. Delineation soil sample SS07 was collected at a depth of 0.5 feet bgs to confirm the western extent of the release. Soil was excavated from the release area to the strictest Table I Closure Criteria encompassing sample locations SS01, SS02 and SS06. The excavation extent measured approximately 800 square feet, and roughly 30 cubic yards of impacted soil were removed and disposed of properly at an approved landfill facility. Following excavation, four composite soil samples (FS01 through FS04) were collected from the floor of the excavation at a depth of 1-foot bgs. Due to the shallow depth of the

excavation, soil from the sidewalls was incorporated into all confirmation floor soil samples collected. XTO submitted a *Closure Request* on March 8, 2023 requesting no further action following delineation of the release and excavation of all soil exceeding the Closure Criteria and/or reclamation requirement. All previously completed remedial activities are summarized in the original *Closure Request* included in Appendix A. On July 21, 2023, NMOCD denied the *Closure Request* for Incident Number NAPP2233339417 for the following reasons:

- *"The Closure Report is Denied. The "step-out" samples on pad to verify the edge of the release should only be a maximum of 1-2 feet from the observed edge of the release. Stepping out away from the release area toward the edge of the pad may tell us whether or not the release left the active well pad, but it does not tell us where the actual edge of the release is located. Please make sure that the edge of the release extent is accurately defined."*

CLOSURE CRITERIA

The *Closure Request* detailed the site characterization completed 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 in the original *Closure Request* prepared for Incident Number NAPP2233339417 that is included in Appendix A. Potential Site receptors are identified on Figure 1. Based on the results of the site characterization, the following 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

ADDITIONAL SOIL SAMPLING ACTIVITIES

On December 8, 2023, Ensolum personnel collected six additional delineation soil samples (SS08 to SS13) roughly 2 feet from the edge of the previous excavation at a depth of approximately 0.5 feet bgs. One 5-point composite soil sample (SW01) was also collected from the sidewall of the previous excavation. 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 5-point composite sample was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. 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 Cardinal Laboratories (Cardinal) in Hobbs, 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 Standard Method SM4500.

Laboratory analytical results indicated TPH was detected in compliance with the Closure Criteria but exceeding the reclamation requirement in samples SS12 and SS13. On March 4, 2024, delineation soil samples BH01 and BH02 collected at a depth of 1-foot bgs were collected, handled, and analyzed as

described above to delineate waste-containing soil vertically beneath SS12 and SS13, and delineation sample SS14 was collected at a depth of 0.5 feet bgs to define waste-containing soil laterally north of the excavation. The delineation samples were field screened for VOCs and chloride and submitted to Cardinal for the same analysis and following the same procedures described above. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit. Delineation soil samples are illustrated on Figure 2, and the excavation sidewall soil sample is depicted on Figure 3.

EXCAVATION AND CONFIRMATION SAMPLING ACTIVITIES

On December 20, 2024, Ensolum personnel returned to the Site to oversee additional excavation north of the previous excavation at sampling locations SS12 and SS13 that reported TPH levels exceeding the reclamation requirement. Excavation of waste-containing soil was performed using a mini excavator and transport vehicles. To further direct excavation activities, soil was field screened for VOCs and chloride as described above. The excavation was completed to depths ranging from 1-foot bgs in the eastern half to 1.5 feet bgs in the western half. The excavation area measured approximately 232 square feet. Approximately 9 cubic yards of waste-containing soil were removed during excavation activities.

Following removal of the waste-containing soil, 5-point composite soil samples were collected every 200 square feet from the sidewalls and floor of the excavation using the methodology described above. Confirmation floor sample FS05 was collected at a depth of 1-foot bgs, and floor sample FS06 was collected at a depth of 1.5 feet bgs. One sidewall confirmation sample (SW02) was collected from ground surface to 1-foot bgs. The excavation extent and confirmation soil sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 3.

The final excavation extent measured approximately 1,232 square feet. A total of approximately 39 cubic yards of impacted soil was removed during excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. The excavation was backfilled in January 2025 with material purchased locally, and the Site was recontoured to match pre-existing site conditions. Photographic documentation of excavation activities is included in Appendix B.

LABORATORY ANALYTICAL RESULTS

Following excavation activities, laboratory analytical results confirm that impacted and/or waste-containing soil was fully defined as requested by NMOCD in the denial response. Furthermore, analytical results verify that all impacted and/or waste-containing soil was removed. The laboratory analytical results are summarized on Table 1, and the 2024 laboratory analytical reports are included in Appendix C.

CLOSURE REQUEST

Soil delineation sampling, excavation activities, and confirmation sampling were conducted at the Site to address the November 15, 2022 release of produced water. Laboratory analytical results from confirmation samples collected following excavation indicated that all COC concentrations were in compliance with the Closure Criteria and the reclamation standard. Based on soil sample analytical results, no further remediation is required. The excavation was backfilled with material purchased locally, and the Site was recontoured to match pre-existing site conditions.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs, and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2233339417.

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

Sincerely,
Ensolum, LLC

Katherine Kahn, P.G.
Senior Managing Geologist

Tacoma Morrissey, M.S.
Associate Principal

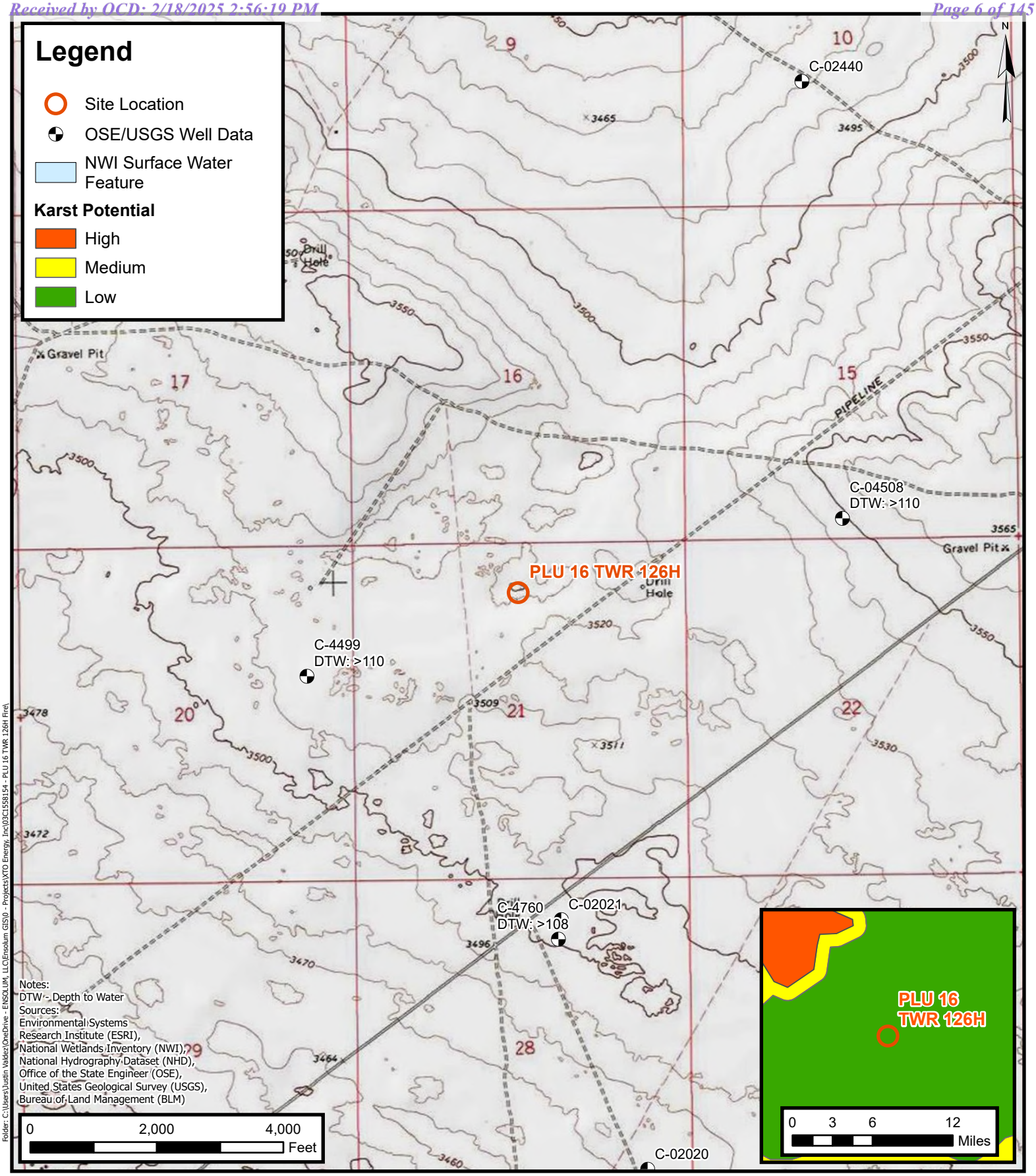
cc: Colton Brown, XTO
Kaylan Dirkx, XTO
BLM

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	March 8, 2023 *Closure Request*
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation

ENSOLUM

FIGURES



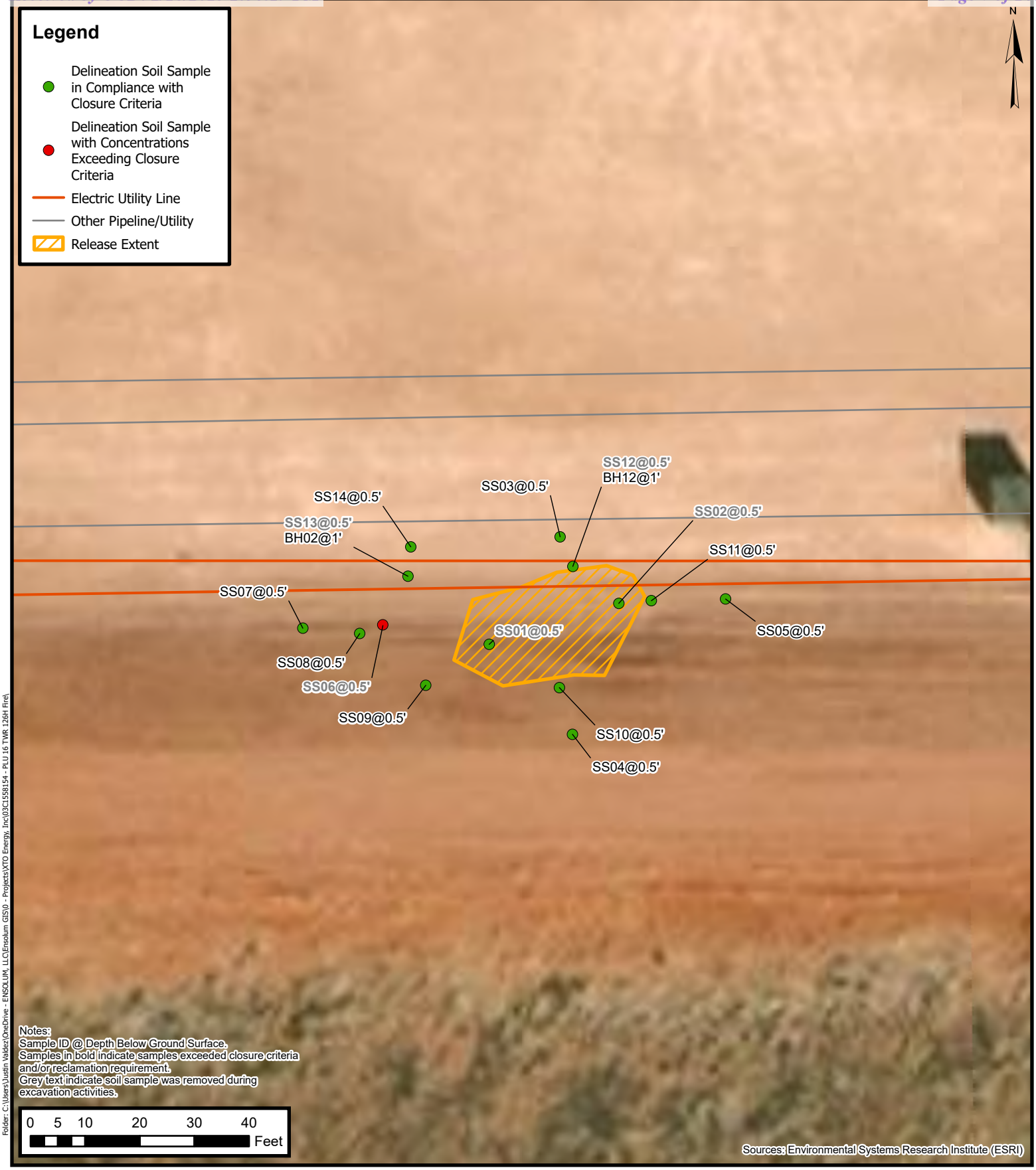
Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558154 - PLU 16 TWR 126H Fire\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
PLU 16 TWR 126H
Incident Number: NAPP2233339417
Unit B, Section 21, T 24S, R 31E
Eddy County, New Mexico

FIGURE 1



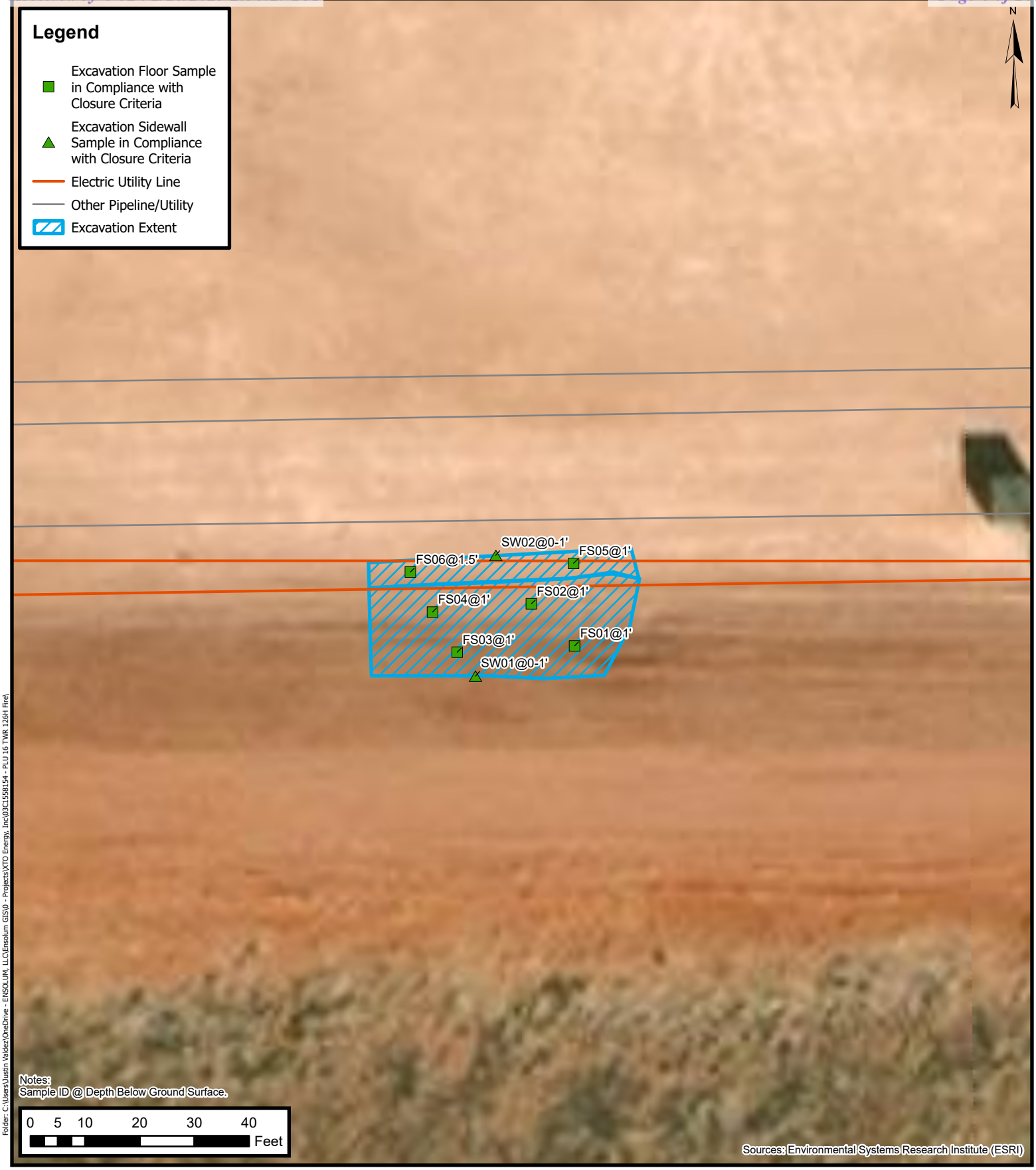
Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558154 - PLU 16 TWR 126H Fire\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
PLU 16 TWR 126H
Incident Number: NAPP2233339417
Unit B, Section 21, T 24S, R 31E
Eddy County, New Mexico

FIGURE 2



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558154 - PLU 16 TWR 126H Fire\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
PLU 16 TWR 126H
Incident Number: NAPP2233339417
Unit B, Section 21, T 24S, R 31E
Eddy County, New Mexico

FIGURE 3

ENSOLUM

TABLE

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 16 Twin Wells Ranch 126H
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~~	~~01/11/2023~~	~~0.5~~	~~<0.00200~~	~~<0.00401~~	~~<50.0~~	~~238~~	~~<50.0~~	~~238~~	~~238~~	~~740~~
~~SS02~~	~~01/11/2023~~	~~0.5~~	~~<0.00198~~	~~<0.00396~~	~~<50.0~~	~~127~~	~~<50.0~~	~~127~~	~~127~~	~~277~~
SS03	01/11/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	195
SS04	01/11/2023	0.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	62.3
SS05	01/11/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	217
~~SS06~~	~~01/11/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.8~~	~~1,740~~	~~<49.8~~	~~**1,740**~~	~~**1,740**~~	~~322~~
SS07	02/02/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	268
SS08	12/08/2023	0.5	<0.00200	<0.00399	<49.9	53.7	<49.9	53.7	53.7	7.73
SS09	12/08/2023	0.5	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	<5.03
SS10	12/08/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	<5.05
SS11	12/08/2023	0.5	<0.00199	<0.00398	<49.6	54.7	<49.6	54.7	54.7	81.3
~~SS12~~	~~12/08/2023~~	~~0.5~~	~~<0.00198~~	~~<0.00396~~	~~<50.3~~	~~187~~	~~<50.3~~	~~187~~	~~187~~	~~273~~
BH 01	03/04/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48
~~SS13~~	~~12/08/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<50.1~~	~~160~~	~~<50.1~~	~~160~~	~~160~~	~~369~~
BH 02	03/04/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SS14	03/04/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48
Confirmation Soil Samples										
FS01	02/02/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	45.9
FS02	02/02/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	117
FS03	02/02/2023	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	42.3
FS04	02/02/2023	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	51.7
FS05	12/20/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
FS06	12/20/2024	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
SW01	12/08/2023	0 - 1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	12.4
SW02	12/20/2024	0 - 1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368

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 Closure Criteria

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

ENSOLUM

APPENDIX A

March 8, 2023 *Closure Request*

March 8, 2023

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

Re: Closure Request
PLU 16 Twin Wells Ranch 126H
Incident Number NAPP2233339417
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document assessment and soil sampling activities at the PLU 16 Twin Wells Ranch 126H (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a produced water release. Based on field observations, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing Site assessment and excavation activities that have occurred and requesting no further action for Incident Number NAPP2233339417.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit B, Section 21, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20795°, -103.78258°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On November 15, 2022, a low-pressure hose failed resulting in approximately 2.0 barrels (bbls) of produced water spraying onto a nearby light plant and the surface of the well pad. The light plant electrical panel shorted and caused a small fire to ignite. A fire extinguisher was used to extinguish the fire; 0.5 bbls of produced water were recovered. XTO immediately reported the release to the NMOCD via email on November 15, 2022 and submitted a Release Notification Form C-141 (Form C-141) on November 29, 2022. The release was assigned Incident Number NAPP2233339417.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on a recent soil boring permitted through the New Mexico Office of the State Engineer (NMOSE) and drilled for determination of regional groundwater depth. On December 30, 2020, a soil boring (C-4499) was drilled approximately 0.68 miles southwest of the Site and was advanced to a depth of 110 feet bgs. A field geologist logged and described soils continuously. No moisture or groundwater was

encountered during drilling activites. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The Well Record and Log is included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is dry wash located approximately 8,519 feet northwest of the Site. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from any freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Potential Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT ACTIVITIES

On January 11, 2023, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Six delineation soil samples (SS01 through SS06) were collected within and around the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of the release. The delineation soil samples were field screened for volatile aromatic hydrocarbons (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix B.

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 constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they are collected may not have equilibrated to the 6 degrees Celcius required for shippment and long term storage, but are considered to have been received in acceptable condition by the laboratory. Based on laboratory analytical results for delineation soil samples SS06, which included TPH concentrations exceeding Closure Criteria, additional remedial actions appeared warranted.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On February 2, 2023, Ensolum returned to the Site to oversee excavation and additional delineation activities. Delineation soil sample SS07 was collected at a depth of 0.5 feet bgs to confirm the western extent of the release. Soil was excavated from the release area to the strictest Table I Closure Criteria to alleviate concerns from NMOCD regarding the distance of the closest groundwater well. Excavation activities were performed by use of heavy equipment and were restricted to the well pad. To direct excavation activities, Ensolum personnel screened soil as described above.

Following removal of soil, Ensolum personnel collected 5-point composite soil samples representing up to 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS04 were collected from the floor of the excavation at a depth of 1-foot bgs. Due to the shallow depth of the excavation, soil from the sidewalls was incorporated into all confirmation floor soil samples collected. The excavation soil samples were handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The final excavation extent measured approximately 800 square feet. A total of approximately 30 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation areas were secured with fencing.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil sample SS06 indicated TPH-GRO/TPH-DRO concentrations exceed the Closure Critera. All other delineation soil samples were compliant with the Closure Criteria and lateral delineation samples were compliant with the most stringent Table I Closure Criteria. XTO excavated soil in the release area, and results from all confirmation soil samples were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results are summarized in attached Table 1 and the complete laboratory analytical reports are included in Appendix C.

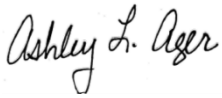
CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the November 15, 2022, release of produced water. Excavation activities were completed based on laboratory analytical results for delineation soil sample SS06 which indicated TPH-GRO/TPH-DRO concentrations exceeded the Closure Criteria. All excavation soil samples collected from the final excavation extent indicated COC concentrations were compliant with the most stringent Table I Closure Criteria. Based on the soil sample analytical results, no further remediation was required. The excavation has been backfilled with material purchased locally and the Site has been recontoured to match pre-existing site conditions. Photographic documentation of the backfill is provided in Appendix B.

Excavation of soil has mitigated impacts exceeding the most stringent Table I Closure Criteria at this Site. Depth to groundwater has been estimated 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 NAPP2233339417.

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

Sincerely,
Ensolum, LLC



Benjamin J. Belill
Project Geologist

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

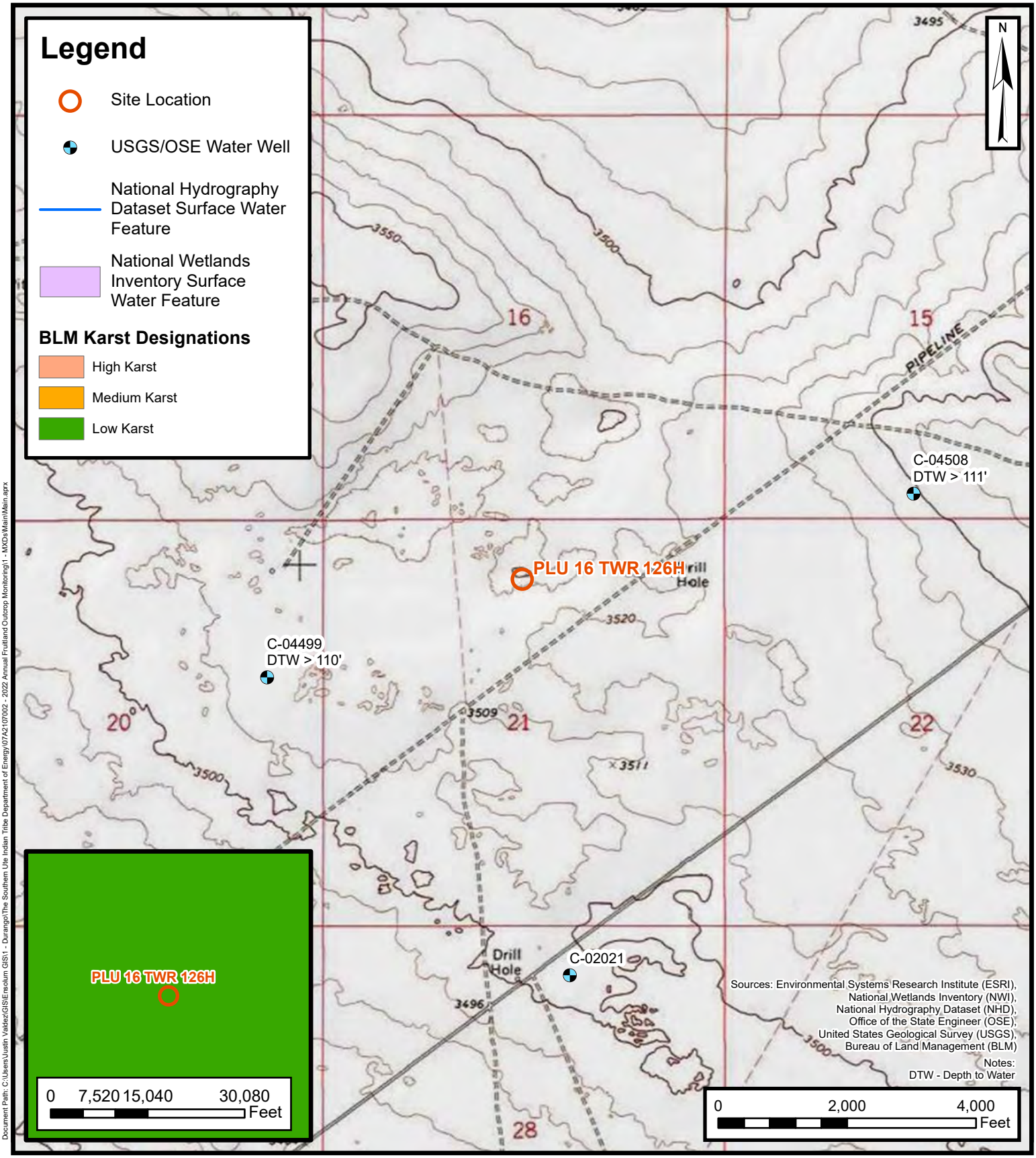
cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

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	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Notifications

ENSOLUM

FIGURES



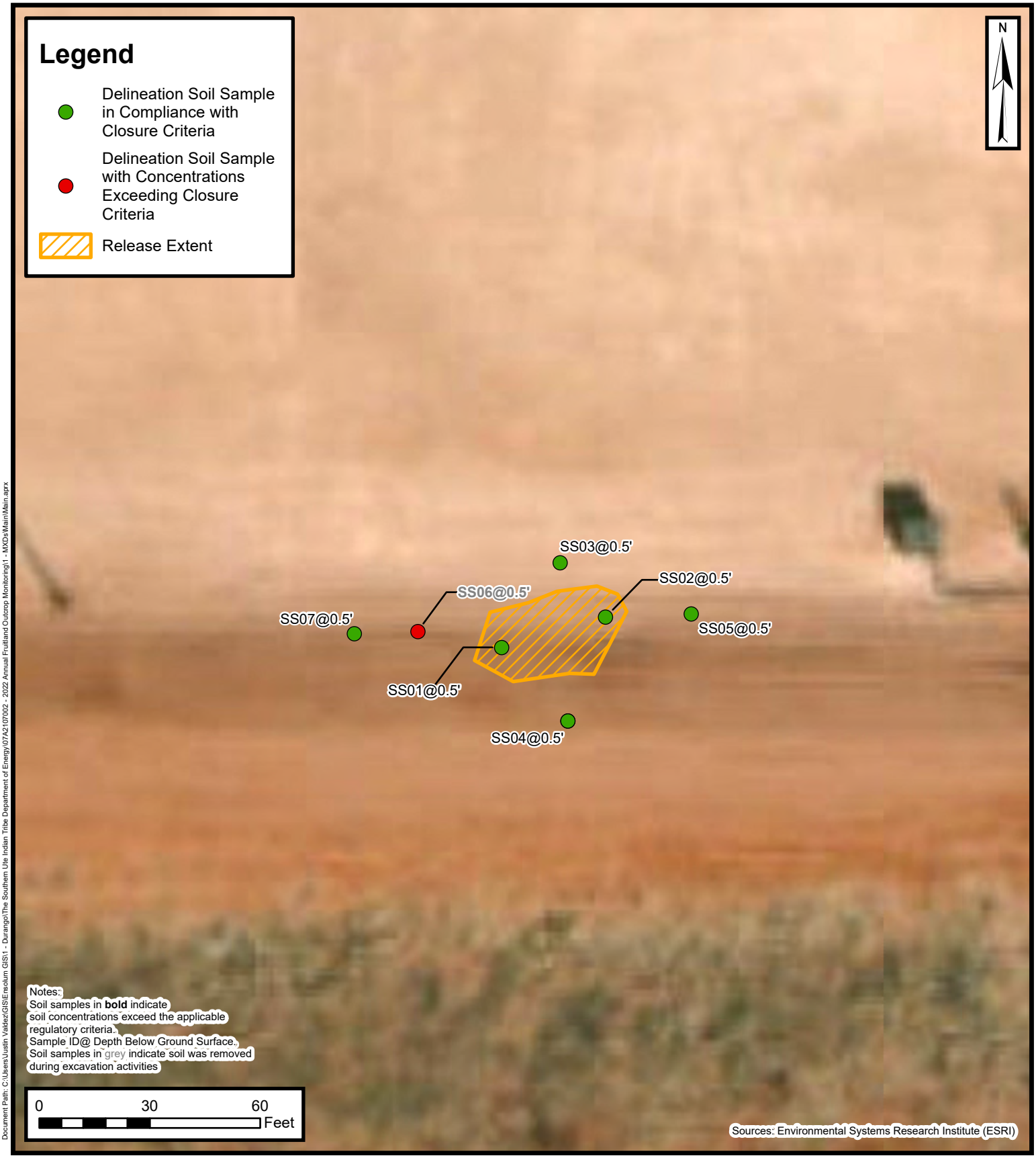
Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\The Southern Ute Indian Tribe Department of Energy\07A21\07002 - 2022 Annual Fruitland Outcrop Monitoring\1 - MXDs\Main\Main.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

PLU 16 TWR 126H
XTO Energy, Inc
Unit B Sec 21 T24S R31E
Eddy County, New Mexico
Incident Number: nAPP2233339417

FIGURE
1



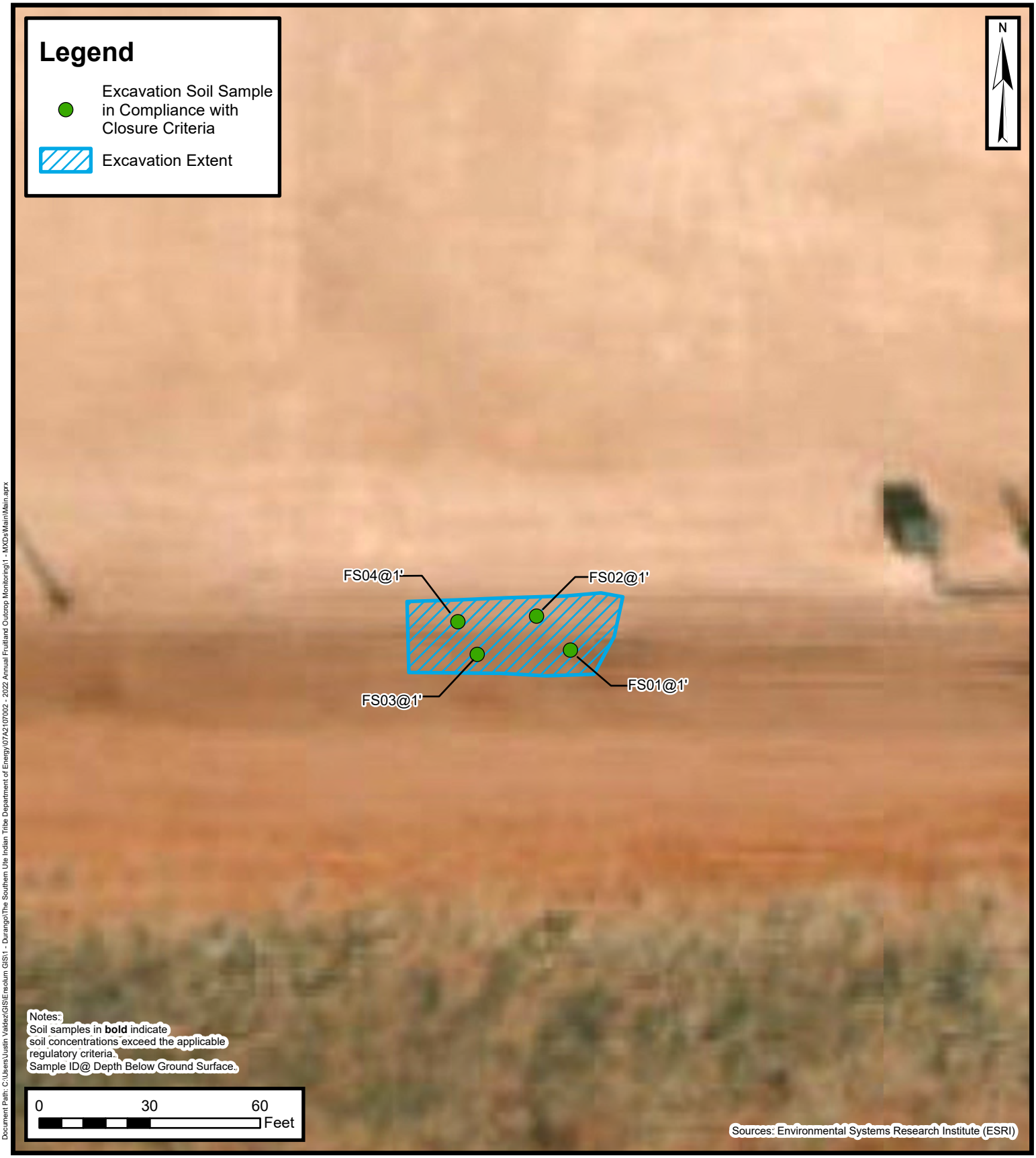
Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\The Southern Ute Indian Tribe Department of Energy\07A2107002 - 2022 Annual Fruitland Outcrop Monitoring\1 - MXDs\Main\Main.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

PLU 16 TWR 126H
XTO Energy, Inc
Unit B Sec 21 T24S R31E
Eddy County, New Mexico
Incident Number: nAPP2233339417

FIGURE
2



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\1 - Durango\The Southern Ute Indian Tribe Department of Energy\07A2107002 - 2022 Annual Fruitland Outcrop Monitoring\1 - MXDs\Main\Main.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

PLU 16 TWR 126H
XTO Energy, Inc
Unit B Sec 21 T24S R31E
Eddy County, New Mexico
Incident Number: nAPP2233339417

FIGURE
3

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 16 Twin Wells Ranch 126H
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~~	~~01/11/2023~~	~~0.5~~	~~<0.00200~~	~~<0.00401~~	~~<50.0~~	~~238~~	~~<50.0~~	~~238~~	~~238~~	~~740~~
~~SS02~~	~~01/11/2023~~	~~0.5~~	~~<0.00198~~	~~<0.00396~~	~~<50.0~~	~~127~~	~~<50.0~~	~~127~~	~~127~~	~~277~~
SS03	01/11/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	195
SS04	01/11/2023	0.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	62.3
SS05	01/11/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	217
~~SS06~~	~~01/11/2023~~	~~0.5~~	~~<0.00199~~	~~<0.00398~~	~~<49.8~~	~~1,740~~	~~<49.8~~	~~**1,740**~~	~~1,740~~	~~322~~
SS07	02/02/2023	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	268
Confirmation Soil Samples										
FS01	02/02/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	45.9
FS02	02/02/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	117
FS03	02/02/2023	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	42.3
FS04	02/02/2023	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	51.7

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
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

ENSOLUM

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 (MW-1)	n/a	C-4499

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°	12'	15.89"	N
	LONGITUDE	-103°	47'	36.29"	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

SE NE Sec. 20 T24S R31E

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)
12/30/2020	12/30/2020	temporary well material	110	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	110	±8.5	Boring- HSA	--	--	--	--

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-4499	POD NO. 1	TRN NO. 682532	
LOCATION 24S.31E.20.243		WELL TAG ID NO. —	PAGE 1 OF 2

OSE DII JAN 27 2021 PM3:34

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	6	6	SAND, well graded, fine-to-large grain particles red-brown, dry	~~Y~~ ✓ N	
6	8	2	SAND, poorly graded, fine grained little clay mod. plasitcity, red-brown, moist	Y ✓ N	
8	11	3	CALICHE, mod. consolidated, some sand, medium /fine grain, white-tan, dry	Y ✓ N	
11	46	35	CALICHE, mod. consolidated, some sand, medium to fine grain, white-tan, dry.	Y ✓ N	
46	74	28	SAND, well-graded, medium grain,caliche gravel (1-4mm), light brown, dry.	Y ✓ N	
74	110	36	SAND, well-graded, fine/large grain, few clay, cohesive, red-brown, dry	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.

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 — 01/15/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4499	POD NO. 1	TRN NO. 682532
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

OSE DIT JAN 27 2021 PM3:34

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
PLU 16 Twin Wells Ranch 126H
Incident Number NAPP2233339417

Photograph 1 Date: 1/11/2023
Description: Site assessment, release extent area
View: Southwest

Photograph 2 Date: 2/2/2023
Description: Excavation activities
View: West

Photograph 3 Date: 2/2/2023
Description: Final excavation extent
View: Southeast

Photograph 4 Date: 3/1/2023
Description: Excavation backfilled
View: Southwest

ENSOLUM

APPENDIX C

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 1/17/2023 4:19:47 PM

JOB DESCRIPTION

PLU 16 TWR 126H Fire
SDG NUMBER 03C1558154

JOB NUMBER

890-3830-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

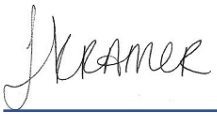
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
1/17/2023 4:19:47 PM

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

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Laboratory Job ID: 890-3830-1
SDG: 03C1558154

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

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 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

Job ID: 890-3830-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3830-1

Receipt
The samples were received on 1/11/2023 3:00 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 4.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3830-1) and SS02 (890-3830-2).

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-3830-1), (LCSD 880-43908/3-A), (MB 880-43908/1-A) and (890-3793-A-1-C). 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 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

Client Sample ID: SS01

Lab Sample ID: 890-3830-1
Matrix: Solid
Date Collected: 01/11/23 09:50
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 21:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 21:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 21:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/13/23 13:36	01/16/23 21:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 21:45	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/13/23 13:36	01/16/23 21:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*01/13/23 13:36*	*01/16/23 21:45*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/13/23 13:36*	*01/16/23 21:45*	*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			01/17/23 14:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**238**		50.0		mg/Kg			01/16/23 16:51	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		01/13/23 13:08	01/15/23 18:42	1
Diesel Range Organics (Over C10-C28)	**238**		50.0		mg/Kg		01/13/23 13:08	01/15/23 18:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/13/23 13:08	01/15/23 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*01/13/23 13:08*	*01/15/23 18:42*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*01/13/23 13:08*	*01/15/23 18:42*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**740**		5.05		mg/Kg			01/17/23 11:00	1

Client Sample ID: SS02

Lab Sample ID: 890-3830-2
Matrix: Solid
Date Collected: 01/11/23 09:55
Date Received: 01/11/23 15:00
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		01/13/23 13:36	01/16/23 22:06	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/13/23 13:36	01/16/23 22:06	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/13/23 13:36	01/16/23 22:06	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/13/23 13:36	01/16/23 22:06	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/13/23 13:36	01/16/23 22:06	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/13/23 13:36	01/16/23 22:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*01/13/23 13:36*	*01/16/23 22:06*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

Client Sample ID: SS02

Date Collected: 01/11/23 09:55
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

Lab Sample ID: 890-3830-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*01/13/23 13:36*	*01/16/23 22:06*	*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			01/17/23 14:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**127**		50.0		mg/Kg			01/16/23 16:51	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		01/13/23 13:08	01/15/23 19:04	1
Diesel Range Organics (Over C10-C28)	**127**		50.0		mg/Kg		01/13/23 13:08	01/15/23 19:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/13/23 13:08	01/15/23 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*01/13/23 13:08*	*01/15/23 19:04*	*1*
o-Terphenyl	*128*		*70 - 130*	*01/13/23 13:08*	*01/15/23 19:04*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**277**		5.04		mg/Kg			01/17/23 11:06	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3808-A-1-D MS	Matrix Spike	111	102
890-3808-A-1-E MSD	Matrix Spike Duplicate	112	103
890-3830-1	SS01	119	106
890-3830-2	SS02	117	100
LCS 880-43748/1-A	Lab Control Sample	111	100
LCSD 880-43748/2-A	Lab Control Sample Dup	112	105
MB 880-43748/5-A	Method Blank	112	100
MB 880-43960/8	Method Blank	110	99

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)
890-3793-A-1-D MS	Matrix Spike	92	100
890-3793-A-1-E MSD	Matrix Spike Duplicate	96	107
890-3830-1	SS01	112	139 S1+
890-3830-2	SS02	110	128
LCS 880-43908/2-A	Lab Control Sample	111	127
LCSD 880-43908/3-A	Lab Control Sample Dup	110	132 S1+
MB 880-43908/1-A	Method Blank	167 S1+	203 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43748/5-A
Matrix: Solid
Analysis Batch: 43960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43748

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 19:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 19:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 19:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/13/23 13:36	01/16/23 19:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:36	01/16/23 19:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/13/23 13:36	01/16/23 19:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*01/13/23 13:36*	*01/16/23 19:34*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*01/13/23 13:36*	*01/16/23 19:34*	*1*

Lab Sample ID: LCS 880-43748/1-A
Matrix: Solid
Analysis Batch: 43960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43748

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1121		mg/Kg		112	70 - 130		
Toluene			0.100	0.1077		mg/Kg		108	70 - 130		
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2165		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1024		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-43748/2-A
Matrix: Solid
Analysis Batch: 43960

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43748

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1159		mg/Kg		116	70 - 130	3	35
Toluene			0.100	0.1086		mg/Kg		109	70 - 130	1	35
Ethylbenzene			0.100	0.1066		mg/Kg		107	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2192		mg/Kg		110	70 - 130	1	35
o-Xylene			0.100	0.1045		mg/Kg		105	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-3808-A-1-D MS
Matrix: Solid
Analysis Batch: 43960

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43748

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.101	0.09870		mg/Kg		98	70 - 130		
Toluene	<0.00200	U	0.101	0.09623		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

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

Lab Sample ID: 890-3808-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43960 — **Prep Batch: 43748**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.101	0.09472		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.202	0.1946		mg/Kg		96	70 - 130
o-Xylene	<0.00200	U	0.101	0.09494		mg/Kg		94	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-3808-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43960 — **Prep Batch: 43748**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.1006		mg/Kg		101	70 - 130	2	35
Toluene	<0.00200	U	0.0996	0.09733		mg/Kg		98	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0996	0.09546		mg/Kg		96	70 - 130	1	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1956		mg/Kg		98	70 - 130	1	35
o-Xylene	<0.00200	U	0.0996	0.09472		mg/Kg		95	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 880-43960/8 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43960

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			01/16/23 12:24	1
Toluene	<0.00200	U	0.00200	mg/Kg			01/16/23 12:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			01/16/23 12:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			01/16/23 12:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			01/16/23 12:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			01/16/23 12:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*01/16/23 12:24*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*		*01/16/23 12:24*	*1*

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

Lab Sample ID: MB 880-43908/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43947 — **Prep Batch: 43908**

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		01/13/23 13:08	01/15/23 08:29	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

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

Lab Sample ID: MB 880-43908/1-A
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43908

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/13/23 13:08	01/15/23 08:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/13/23 13:08	01/15/23 08:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*167*	*S1+*	*70 - 130*	*01/13/23 13:08*	*01/15/23 08:29*	*1*
o-Terphenyl	*203*	*S1+*	*70 - 130*	*01/13/23 13:08*	*01/15/23 08:29*	*1*

Lab Sample ID: LCS 880-43908/2-A
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43908

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1045		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	972.8		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*127*		*70 - 130*

Lab Sample ID: LCSD 880-43908/3-A
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43908

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1027		mg/Kg		103	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	981.4		mg/Kg		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*132*	*S1+*	*70 - 130*

Lab Sample ID: 890-3793-A-1-D MS
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43908

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	872.4		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1034		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

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

Lab Sample ID: 890-3793-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43947 — **Prep Batch: 43908**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	901.5		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1119		mg/Kg		111	70 - 130	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43971/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44147

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/17/23 10:03	1

Lab Sample ID: LCS 880-43971/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44147

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.4		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-43971/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44147

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.6		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3828-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	221		251	479.4		mg/Kg		103	90 - 110		

Lab Sample ID: 890-3828-A-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	221		251	479.1		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

GC VOA

Prep Batch: 43748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Total/NA	Solid	5035	
890-3830-2	SS02	Total/NA	Solid	5035	
MB 880-43748/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43748/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43748/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3808-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3808-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Total/NA	Solid	8021B	43748
890-3830-2	SS02	Total/NA	Solid	8021B	43748
MB 880-43748/5-A	Method Blank	Total/NA	Solid	8021B	43748
MB 880-43960/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-43748/1-A	Lab Control Sample	Total/NA	Solid	8021B	43748
LCSD 880-43748/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43748
890-3808-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	43748
890-3808-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43748

Analysis Batch: 44183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Total/NA	Solid	Total BTEX	
890-3830-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Total/NA	Solid	8015NM Prep	
890-3830-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-43908/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43908/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43908/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3793-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3793-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Total/NA	Solid	8015B NM	43908
890-3830-2	SS02	Total/NA	Solid	8015B NM	43908
MB 880-43908/1-A	Method Blank	Total/NA	Solid	8015B NM	43908
LCS 880-43908/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43908
LCSD 880-43908/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43908
890-3793-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	43908
890-3793-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43908

Analysis Batch: 44063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Total/NA	Solid	8015 NM	
890-3830-2	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

HPLC/IC

Leach Batch: 43971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Soluble	Solid	DI Leach	
890-3830-2	SS02	Soluble	Solid	DI Leach	
MB 880-43971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3828-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3828-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3830-1	SS01	Soluble	Solid	300.0	43971
890-3830-2	SS02	Soluble	Solid	300.0	43971
MB 880-43971/1-A	Method Blank	Soluble	Solid	300.0	43971
LCS 880-43971/2-A	Lab Control Sample	Soluble	Solid	300.0	43971
LCSD 880-43971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43971
890-3828-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	43971
890-3828-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43971

Lab Chronicle

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

Client Sample ID: SS01

Lab Sample ID: 890-3830-1

Date Collected: 01/11/23 09:50
Matrix: Solid
Date Received: 01/11/23 15:00

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	43748	01/13/23 13:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43960	01/16/23 21:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44183	01/17/23 14:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			44063	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43908	01/13/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 18:42	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 11:00	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-3830-2

Date Collected: 01/11/23 09:55
Matrix: Solid
Date Received: 01/11/23 15:00

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	43748	01/13/23 13:36	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43960	01/16/23 22:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44183	01/17/23 14:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			44063	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43908	01/13/23 13:08	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 19:04	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 11:06	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 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

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 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3830-1
SDG: 03C1558154

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3830-1	SS01	Solid	01/11/23 09:50	01/11/23 15:00	0.5'
890-3830-2	SS02	Solid	01/11/23 09:55	01/11/23 15:00	0.5'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	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 16 TWR 126H Fire	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558154	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TM-807
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.6
Total Containers:		Corrected Temperature:	4.4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	S	1/11/23	9:50	.5	G	1		✓	✓	✓
SS02	S	1/11/23	9:55	.5	G	1		✓	✓	✓

890-3830 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID:
nAPP2233339417
Cost Center:
1665331001
AFE:

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

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3830-1
SDG Number: 03C1558154

Login Number: 3830
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: 890-3830-1
SDG Number: 03C1558154

Login Number: 3830
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/13/23 10:36 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/17/2023 4:21:22 PM

JOB DESCRIPTION

PLU 16 TWR 126H Fire
SDG NUMBER 03C1558154

JOB NUMBER

890-3831-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

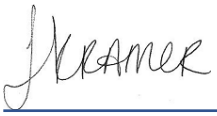
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
1/17/2023 4:21:22 PM

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

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Laboratory Job ID: 890-3831-1
SDG: 03C1558154

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Job ID: 890-3831-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3831-1

Receipt
The samples were received on 1/11/2023 3:00 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 4.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS03 (890-3831-1), SS04 (890-3831-2), SS05 (890-3831-3) and SS06 (890-3831-4).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43910 and analytical batch 880-43961 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

Method 8021B: LCSD biased high. Since only an acceptable LCS is required per the method, the data has been qualified and reported. (LCSD 880-43910/2-A)

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS03 (890-3831-1), SS05 (890-3831-3), SS06 (890-3831-4) and (MB 880-43909/1-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Client Sample ID: SS03

Date Collected: 01/11/23 11:30
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

Lab Sample ID: 890-3831-1
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		01/13/23 13:50	01/16/23 20:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/13/23 13:50	01/16/23 20:12	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		01/13/23 13:50	01/16/23 20:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/13/23 13:50	01/16/23 20:12	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/13/23 13:50	01/16/23 20:12	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/13/23 13:50	01/16/23 20:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*01/13/23 13:50*	*01/16/23 20:12*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*01/13/23 13:50*	*01/16/23 20:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/17/23 14:40	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			01/16/23 16:51	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		01/13/23 13:11	01/15/23 20:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/13/23 13:11	01/15/23 20:50	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/13/23 13:11	01/15/23 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*01/13/23 13:11*	*01/15/23 20:50*	*1*
o-Terphenyl	*156*	*S1+*	*70 - 130*	*01/13/23 13:11*	*01/15/23 20:50*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**195**		5.00		mg/Kg			01/17/23 11:25	1

Client Sample ID: SS04

Date Collected: 01/11/23 11:35
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

Lab Sample ID: 890-3831-2
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		01/13/23 13:50	01/16/23 20:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:50	01/16/23 20:32	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		01/13/23 13:50	01/16/23 20:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/13/23 13:50	01/16/23 20:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:50	01/16/23 20:32	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/13/23 13:50	01/16/23 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*01/13/23 13:50*	*01/16/23 20:32*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Client Sample ID: SS04

Date Collected: 01/11/23 11:35
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

Lab Sample ID: 890-3831-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*01/13/23 13:50*	*01/16/23 20:32*	*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			01/17/23 14:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			01/16/23 16:51	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		01/13/23 13:11	01/15/23 21:54	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		01/13/23 13:11	01/15/23 21:54	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/13/23 13:11	01/15/23 21:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*01/13/23 13:11*	*01/15/23 21:54*	*1*
o-Terphenyl	*126*		*70 - 130*	*01/13/23 13:11*	*01/15/23 21:54*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62.3**		5.00	mg/Kg			01/17/23 11:31	1

Client Sample ID: SS05

Date Collected: 01/11/23 11:40
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

Lab Sample ID: 890-3831-3

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		01/13/23 13:50	01/16/23 20:53	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/13/23 13:50	01/16/23 20:53	1
Ethylbenzene	<0.00199	U *+	0.00199	mg/Kg		01/13/23 13:50	01/16/23 20:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/13/23 13:50	01/16/23 20:53	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/13/23 13:50	01/16/23 20:53	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/13/23 13:50	01/16/23 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*01/13/23 13:50*	*01/16/23 20:53*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*01/13/23 13:50*	*01/16/23 20:53*	*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			01/17/23 14:40	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			01/16/23 16:51	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Client Sample ID: SS05

Lab Sample ID: 890-3831-3
Matrix: Solid
Date Collected: 01/11/23 11:40
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

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		01/13/23 13:11	01/15/23 22:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/13/23 13:11	01/15/23 22:16	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/13/23 13:11	01/15/23 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*01/13/23 13:11*	*01/15/23 22:16*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*01/13/23 13:11*	*01/15/23 22:16*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**217**		5.03		mg/Kg			01/17/23 11:37	1

Client Sample ID: SS06

Lab Sample ID: 890-3831-4
Matrix: Solid
Date Collected: 01/11/23 11:45
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		01/13/23 13:50	01/16/23 21:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/13/23 13:50	01/16/23 21:14	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		01/13/23 13:50	01/16/23 21:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/13/23 13:50	01/16/23 21:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/13/23 13:50	01/16/23 21:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/13/23 13:50	01/16/23 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/13/23 13:50*	*01/16/23 21:14*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*01/13/23 13:50*	*01/16/23 21:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/17/23 14:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1740**		49.8		mg/Kg			01/16/23 16:51	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		01/13/23 13:11	01/15/23 22:37	1
Diesel Range Organics (Over C10-C28)	**1740**		49.8		mg/Kg		01/13/23 13:11	01/15/23 22:37	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		01/13/23 13:11	01/15/23 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*01/13/23 13:11*	*01/15/23 22:37*	*1*
o-Terphenyl	*149*	*S1+*	*70 - 130*	*01/13/23 13:11*	*01/15/23 22:37*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Client Sample ID: SS06
Date Collected: 01/11/23 11:45
Date Received: 01/11/23 15:00
Sample Depth: 0.5'

Lab Sample ID: 890-3831-4
Matrix: Solid

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	322		5.02		mg/Kg			01/17/23 12:02	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3831-1	SS03	107	111
890-3831-2	SS04	105	109
890-3831-3	SS05	110	112
890-3831-4	SS06	120	112
890-3832-A-8-E MS	Matrix Spike	107	102
890-3832-A-8-F MSD	Matrix Spike Duplicate	109	98
LCS 880-43910/1-A	Lab Control Sample	99	101
LCSD 880-43910/2-A	Lab Control Sample Dup	104	104
MB 880-43910/5-A	Method Blank	99	100

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3831-1	SS03	126	156 S1+
890-3831-1 MS	SS03	102	114
890-3831-1 MSD	SS03	107	119
890-3831-2	SS04	106	126
890-3831-3	SS05	131 S1+	142 S1+
890-3831-4	SS06	133 S1+	149 S1+
LCS 880-43909/2-A	Lab Control Sample	104	126
LCSD 880-43909/3-A	Lab Control Sample Dup	105	126
MB 880-43909/1-A	Method Blank	179 S1+	227 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43910/5-A
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43910

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:50	01/16/23 14:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:50	01/16/23 14:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:50	01/16/23 14:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/13/23 13:50	01/16/23 14:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/13/23 13:50	01/16/23 14:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/13/23 13:50	01/16/23 14:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*01/13/23 13:50*	*01/16/23 14:39*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*01/13/23 13:50*	*01/16/23 14:39*	*1*

Lab Sample ID: LCS 880-43910/1-A
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43910

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1229		mg/Kg		123	70 - 130		
Toluene			0.100	0.1128		mg/Kg		113	70 - 130		
Ethylbenzene			0.100	0.1225		mg/Kg		122	70 - 130		
m-Xylene & p-Xylene			0.200	0.2218		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1119		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-43910/2-A
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43910

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1348	*+	mg/Kg		135	70 - 130	9	35
Toluene			0.100	0.1189		mg/Kg		119	70 - 130	5	35
Ethylbenzene			0.100	0.1308	*+	mg/Kg		131	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2375		mg/Kg		119	70 - 130	7	35
o-Xylene			0.100	0.1194		mg/Kg		119	70 - 130	7	35

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

Lab Sample ID: 890-3832-A-8-E MS
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43910

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U *+ F2 F1	0.101	0.09977		mg/Kg		99	70 - 130		

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

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

Lab Sample ID: 890-3832-A-8-E MS
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43910

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00202	U F2 F1	0.101	0.07955		mg/Kg		79	70 - 130
Ethylbenzene	<0.00202	U *+ F2 F1	0.101	0.08884		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	<0.00403	U F2 F1	0.202	0.1628		mg/Kg		81	70 - 130
o-Xylene	<0.00202	U F2 F1	0.101	0.08464		mg/Kg		84	70 - 130

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

Lab Sample ID: 890-3832-A-8-F MSD
Matrix: Solid
Analysis Batch: 43961

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43910

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+ F2 F1	0.0990	0.007699	F2 F1	mg/Kg		8	70 - 130	171	35
Toluene	<0.00202	U F2 F1	0.0990	0.01331	F2 F1	mg/Kg		13	70 - 130	143	35
Ethylbenzene	<0.00202	U *+ F2 F1	0.0990	0.007250	F2 F1	mg/Kg		7	70 - 130	170	35
m-Xylene & p-Xylene	<0.00403	U F2 F1	0.198	0.007591	F2 F1	mg/Kg		4	70 - 130	182	35
o-Xylene	<0.00202	U F2 F1	0.0990	0.003161	F2 F1	mg/Kg		3	70 - 130	186	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-43909/1-A
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43909

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		01/13/23 13:11	01/15/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/13/23 13:11	01/15/23 19:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/13/23 13:11	01/15/23 19:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*179*	*S1+*	*70 - 130*	*01/13/23 13:11*	*01/15/23 19:47*	*1*
o-Terphenyl	*227*	*S1+*	*70 - 130*	*01/13/23 13:11*	*01/15/23 19:47*	*1*

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

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

Lab Sample ID: LCS 880-43909/2-A
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43909

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	945.3		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	932.4		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*126*		*70 - 130*

Lab Sample ID: LCSD 880-43909/3-A
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43909

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	907.9		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	939.3		mg/Kg		94	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*126*		*70 - 130*

Lab Sample ID: 890-3831-1 MS
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 43909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	907.3		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1114		mg/Kg		108	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Lab Sample ID: 890-3831-1 MSD
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 43909

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	944.2		mg/Kg		92	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1175		mg/Kg		115	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

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

Lab Sample ID: 890-3831-1 MSD
Matrix: Solid
Analysis Batch: 43947

Client Sample ID: SS03
Prep Type: Total/NA
Prep Batch: 43909

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	*119*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43971/1-A
Matrix: Solid
Analysis Batch: 44147

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			01/17/23 10:03	1

Lab Sample ID: LCS 880-43971/2-A
Matrix: Solid
Analysis Batch: 44147

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.4		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-43971/3-A
Matrix: Solid
Analysis Batch: 44147

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	254.6		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-3828-A-1-F MS
Matrix: Solid
Analysis Batch: 44147

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	221		251	479.4		mg/Kg		103	90 - 110		

Lab Sample ID: 890-3828-A-1-G MSD
Matrix: Solid
Analysis Batch: 44147

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	221		251	479.1		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

GC VOA

Prep Batch: 43910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Total/NA	Solid	5035	
890-3831-2	SS04	Total/NA	Solid	5035	
890-3831-3	SS05	Total/NA	Solid	5035	
890-3831-4	SS06	Total/NA	Solid	5035	
MB 880-43910/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43910/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43910/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3832-A-8-E MS	Matrix Spike	Total/NA	Solid	5035	
890-3832-A-8-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Total/NA	Solid	8021B	43910
890-3831-2	SS04	Total/NA	Solid	8021B	43910
890-3831-3	SS05	Total/NA	Solid	8021B	43910
890-3831-4	SS06	Total/NA	Solid	8021B	43910
MB 880-43910/5-A	Method Blank	Total/NA	Solid	8021B	43910
LCS 880-43910/1-A	Lab Control Sample	Total/NA	Solid	8021B	43910
LCSD 880-43910/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43910
890-3832-A-8-E MS	Matrix Spike	Total/NA	Solid	8021B	43910
890-3832-A-8-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43910

Analysis Batch: 44175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Total/NA	Solid	Total BTEX	
890-3831-2	SS04	Total/NA	Solid	Total BTEX	
890-3831-3	SS05	Total/NA	Solid	Total BTEX	
890-3831-4	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 43909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Total/NA	Solid	8015NM Prep	
890-3831-2	SS04	Total/NA	Solid	8015NM Prep	
890-3831-3	SS05	Total/NA	Solid	8015NM Prep	
890-3831-4	SS06	Total/NA	Solid	8015NM Prep	
MB 880-43909/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43909/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43909/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3831-1 MS	SS03	Total/NA	Solid	8015NM Prep	
890-3831-1 MSD	SS03	Total/NA	Solid	8015NM Prep	

Analysis Batch: 43947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Total/NA	Solid	8015B NM	43909
890-3831-2	SS04	Total/NA	Solid	8015B NM	43909
890-3831-3	SS05	Total/NA	Solid	8015B NM	43909
890-3831-4	SS06	Total/NA	Solid	8015B NM	43909
MB 880-43909/1-A	Method Blank	Total/NA	Solid	8015B NM	43909
LCS 880-43909/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43909

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

GC Semi VOA (Continued)

Analysis Batch: 43947 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-43909/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43909
890-3831-1 MS	SS03	Total/NA	Solid	8015B NM	43909
890-3831-1 MSD	SS03	Total/NA	Solid	8015B NM	43909

Analysis Batch: 44064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Total/NA	Solid	8015 NM	
890-3831-2	SS04	Total/NA	Solid	8015 NM	
890-3831-3	SS05	Total/NA	Solid	8015 NM	
890-3831-4	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Soluble	Solid	DI Leach	
890-3831-2	SS04	Soluble	Solid	DI Leach	
890-3831-3	SS05	Soluble	Solid	DI Leach	
890-3831-4	SS06	Soluble	Solid	DI Leach	
MB 880-43971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3828-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3828-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 44147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3831-1	SS03	Soluble	Solid	300.0	43971
890-3831-2	SS04	Soluble	Solid	300.0	43971
890-3831-3	SS05	Soluble	Solid	300.0	43971
890-3831-4	SS06	Soluble	Solid	300.0	43971
MB 880-43971/1-A	Method Blank	Soluble	Solid	300.0	43971
LCS 880-43971/2-A	Lab Control Sample	Soluble	Solid	300.0	43971
LCSD 880-43971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43971
890-3828-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	43971
890-3828-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43971

Lab Chronicle

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Client Sample ID: SS03

Date Collected: 01/11/23 11:30
Date Received: 01/11/23 15:00

Lab Sample ID: 890-3831-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	43910	01/13/23 13:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43961	01/16/23 20:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44175	01/17/23 14:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			44064	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43909	01/13/23 13:11	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 20:50	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 11:25	CH	EET MID

Client Sample ID: SS04

Date Collected: 01/11/23 11:35
Date Received: 01/11/23 15:00

Lab Sample ID: 890-3831-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	43910	01/13/23 13:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43961	01/16/23 20:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44175	01/17/23 14:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			44064	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	43909	01/13/23 13:11	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 21:54	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 11:31	CH	EET MID

Client Sample ID: SS05

Date Collected: 01/11/23 11:40
Date Received: 01/11/23 15:00

Lab Sample ID: 890-3831-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	43910	01/13/23 13:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43961	01/16/23 20:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44175	01/17/23 14:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			44064	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	43909	01/13/23 13:11	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 22:16	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 11:37	CH	EET MID

Client Sample ID: SS06

Date Collected: 01/11/23 11:45
Date Received: 01/11/23 15:00

Lab Sample ID: 890-3831-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	43910	01/13/23 13:50	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43961	01/16/23 21:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44175	01/17/23 14:40	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Client Sample ID: SS06

Date Collected: 01/11/23 11:45
Date Received: 01/11/23 15:00

Lab Sample ID: 890-3831-4

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			44064	01/16/23 16:51	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	43909	01/13/23 13:11	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43947	01/15/23 22:37	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	43971	01/16/23 09:22	KS	EET MID
Soluble	Analysis	300.0		1			44147	01/17/23 12:02	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 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

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 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-3831-1
SDG: 03C1558154

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3831-1	SS03	Solid	01/11/23 11:30	01/11/23 15:00	0.5'
890-3831-2	SS04	Solid	01/11/23 11:35	01/11/23 15:00	0.5'
890-3831-3	SS05	Solid	01/11/23 11:40	01/11/23 15:00	0.5'
890-3831-4	SS06	Solid	01/11/23 11:45	01/11/23 15:00	0.5'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	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 16 TWR 126H Fire	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558154	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR#007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.6
Total Containers:		Corrected Temperature:	4.4

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS03	S	1/11/23	11:30	.5'	G	1		✓	✓	✓
SS04	S	1/11/23	11:35	.5'		1		✓	✓	✓
SS05	S	1/11/23	11:40	.5'		1		✓	✓	✓
SS06	S	1/11/23	11:45	.5'		1		✓	✓	✓

890-3831 Chain of Custody

Sample Comments

Incident ID:
nAPP2233339417
Cost Center:
1665331001
AFE:

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Ortiz	1-11-23 1500	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3831-1
SDG Number: 03C1558154

Login Number: 3831
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: 890-3831-1
SDG Number: 03C1558154

Login Number: 3831
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/13/23 10:36 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/13/2023 6:32:56 PM

JOB DESCRIPTION

PLU 16 TWR 126H Fire
SDG NUMBER 03C1558154

JOB NUMBER

890-4007-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

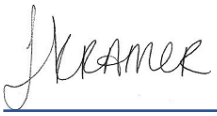
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
2/13/2023 6:32:56 PM

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

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Laboratory Job ID: 890-4007-1
SDG: 03C1558154

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4007-1
Project/Site: PLU 16 TWR 126H Fire SDG: 03C1558154

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, 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 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

Job ID: 890-4007-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4007-1

Receipt
The sample was received on 2/2/2023 3:52 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS07 (890-4007-1).

GC VOA
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: SS07 (890-4007-1). 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 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

Client Sample ID: SS07

Date Collected: 02/02/23 13:10
Date Received: 02/02/23 15:52
Sample Depth: 0.5

Lab Sample ID: 890-4007-1

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		02/09/23 10:23	02/10/23 20:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:23	02/10/23 20:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:23	02/10/23 20:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/09/23 10:23	02/10/23 20:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:23	02/10/23 20:26	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/09/23 10:23	02/10/23 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*02/09/23 10:23*	*02/10/23 20:26*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/09/23 10:23*	*02/10/23 20:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/13/23 18:42	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			02/13/23 17:32	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		02/08/23 10:35	02/12/23 04:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/08/23 10:35	02/12/23 04:40	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/08/23 10:35	02/12/23 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*64*	*S1-*	*70 - 130*	*02/08/23 10:35*	*02/12/23 04:40*	*1*
o-Terphenyl	*77*		*70 - 130*	*02/08/23 10:35*	*02/12/23 04:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**268**		5.00		mg/Kg			02/07/23 12:47	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

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)
880-24301-A-1-E MS	Matrix Spike	118	109
880-24301-A-1-F MSD	Matrix Spike Duplicate	118	105
890-4007-1	SS07	128	111
LCS 880-45890/1-A	Lab Control Sample	106	104
LCSD 880-45890/2-A	Lab Control Sample Dup	107	106
MB 880-45890/5-A	Method Blank	106	105

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)
890-3990-A-1-D MS	Matrix Spike	74	78
890-3990-A-1-E MSD	Matrix Spike Duplicate	77	78
890-4007-1	SS07	64 S1-	77
LCS 880-45765/2-A	Lab Control Sample	105	119
LCSD 880-45765/3-A	Lab Control Sample Dup	98	116
MB 880-45765/1-A	Method Blank	80	101

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45890/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45955 — **Prep Batch: 45890**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:23	02/10/23 13:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:23	02/10/23 13:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:23	02/10/23 13:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/09/23 10:23	02/10/23 13:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:23	02/10/23 13:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/09/23 10:23	02/10/23 13:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/09/23 10:23*	*02/10/23 13:42*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/09/23 10:23*	*02/10/23 13:42*	*1*

Lab Sample ID: LCS 880-45890/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45955 — **Prep Batch: 45890**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09992		mg/Kg		100	70 - 130		
Toluene			0.100	0.1029		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.1033		mg/Kg		103	70 - 130		
m-Xylene & p-Xylene			0.200	0.2205		mg/Kg		110	70 - 130		
o-Xylene			0.100	0.1045		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-45890/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45955 — **Prep Batch: 45890**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09865		mg/Kg		99	70 - 130	1	35
Toluene			0.100	0.1003		mg/Kg		100	70 - 130	3	35
Ethylbenzene			0.100	0.1014		mg/Kg		101	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2169		mg/Kg		108	70 - 130	2	35
o-Xylene			0.100	0.1035		mg/Kg		104	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-24301-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45955 — **Prep Batch: 45890**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.1069		mg/Kg		107	70 - 130		
Toluene	<0.00199	U	0.0998	0.1075		mg/Kg		108	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

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

Lab Sample ID: 880-24301-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45955 — **Prep Batch: 45890**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.1083		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2317		mg/Kg		116	70 - 130
o-Xylene	<0.00199	U	0.0998	0.1102		mg/Kg		110	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 880-24301-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45955 — **Prep Batch: 45890**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09775		mg/Kg		97	70 - 130	9	35
Toluene	<0.00199	U	0.100	0.09791		mg/Kg		98	70 - 130	9	35
Ethylbenzene	<0.00199	U	0.100	0.09845		mg/Kg		98	70 - 130	10	35
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2108		mg/Kg		105	70 - 130	9	35
o-Xylene	<0.00199	U	0.100	0.1005		mg/Kg		100	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-45765/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46052 — **Prep Batch: 45765**

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		02/08/23 10:35	02/11/23 20:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/08/23 10:35	02/11/23 20:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/08/23 10:35	02/11/23 20:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*02/08/23 10:35*	*02/11/23 20:28*	*1*
o-Terphenyl	*101*		*70 - 130*	*02/08/23 10:35*	*02/11/23 20:28*	*1*

Lab Sample ID: LCS 880-45765/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46052 — **Prep Batch: 45765**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	934.0		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	942.0		mg/Kg		94	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

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

Lab Sample ID: LCS 880-45765/2-A
Matrix: Solid
Analysis Batch: 46052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45765

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: LCSD 880-45765/3-A
Matrix: Solid
Analysis Batch: 46052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45765

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	922.0		mg/Kg		92	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	947.5		mg/Kg		95	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: 890-3990-A-1-D MS
Matrix: Solid
Analysis Batch: 46052

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45765

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1111		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)	138		997	1391		mg/Kg		126	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 890-3990-A-1-E MSD
Matrix: Solid
Analysis Batch: 46052

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45765

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1127		mg/Kg		113	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	138		999	1421		mg/Kg		128	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	77		70 - 130
o-Terphenyl	78		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45573/1-A
Matrix: Solid
Analysis Batch: 45700

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			02/07/23 12:05	1

Lab Sample ID: LCS 880-45573/2-A
Matrix: Solid
Analysis Batch: 45700

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	253.7		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-45573/3-A
Matrix: Solid
Analysis Batch: 45700

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	254.0		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-4006-A-1-B MS
Matrix: Solid
Analysis Batch: 45700

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	368		1240	1703		mg/Kg		108	90 - 110		

Lab Sample ID: 890-4006-A-1-C MSD
Matrix: Solid
Analysis Batch: 45700

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	368		1240	1708		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

GC VOA

Prep Batch: 45890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Total/NA	Solid	5035	
MB 880-45890/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45890/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45890/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24301-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-24301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 45955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Total/NA	Solid	8021B	45890
MB 880-45890/5-A	Method Blank	Total/NA	Solid	8021B	45890
LCS 880-45890/1-A	Lab Control Sample	Total/NA	Solid	8021B	45890
LCSD 880-45890/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45890
880-24301-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	45890
880-24301-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45890

Analysis Batch: 46219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-45765/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45765/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3990-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3990-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 46052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Total/NA	Solid	8015B NM	45765
MB 880-45765/1-A	Method Blank	Total/NA	Solid	8015B NM	45765
LCS 880-45765/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45765
LCSD 880-45765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45765
890-3990-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45765
890-3990-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45765

Analysis Batch: 46208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 45573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Soluble	Solid	DI Leach	
MB 880-45573/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45573/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45573/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

HPLC/IC (Continued)

Leach Batch: 45573 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4006-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4006-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 45700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4007-1	SS07	Soluble	Solid	300.0	45573
MB 880-45573/1-A	Method Blank	Soluble	Solid	300.0	45573
LCS 880-45573/2-A	Lab Control Sample	Soluble	Solid	300.0	45573
LCSD 880-45573/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45573
890-4006-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	45573
890-4006-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45573

Lab Chronicle

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

Client Sample ID: SS07

Date Collected: 02/02/23 13:10
Date Received: 02/02/23 15:52

Lab Sample ID: 890-4007-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	45890	02/09/23 10:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45955	02/10/23 20:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46219	02/13/23 18:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			46208	02/13/23 17:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45765	02/08/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46052	02/12/23 04:40	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45573	02/06/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			45700	02/07/23 12:47	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 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

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 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

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 16 TWR 126H Fire

Job ID: 890-4007-1
SDG: 03C1558154

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4007-1	SS07	Solid	02/02/23 13:10	02/02/23 15:52	0.5

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946 Email:		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 16 TWR 126H Fire	Turn Around	
Project Number:	03C1558154	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2	
Total Containers:		Corrected Temperature:	1.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS07	S	2/2/23	1:10	.5	G	1		/	/	/

Parameters

890-4007 Chain of Custody

Preservative Codes

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

Sample Comments

Incident ID:
nAPP2233339417
Cost Center:
1665331001
AFE:

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		2.2.23 1552	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4007-1
SDG Number: 03C1558154

Login Number: 4007
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: 890-4007-1
SDG Number: 03C1558154

Login Number: 4007
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/06/23 08:40 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/15/2023 10:46:57 AM Revision 1

JOB DESCRIPTION

PLU 16 TWR 126H Fire
SDG NUMBER 03C1558154

JOB NUMBER

890-4008-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

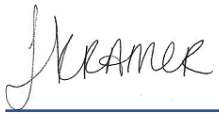
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
2/15/2023 10:46:57 AM
Revision 1

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

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Laboratory Job ID: 890-4008-1
SDG: 03C1558154

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Job ID: 890-4008-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4008-1

REVISION

The report being provided is a revision of the original report sent on 2/13/2023. The report (revision 1) is being revised due to Per client email, requesting chloride re run on FS03 @ 1l.

Report revision history

Receipt
The samples were received on 2/2/2023 3:57 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS03 (890-4008-3) and FS04 (890-4008-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-45662 and analytical batch 880-45951 was outside the control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS03 (890-4008-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS04 (890-4008-4) and (890-4008-A-3-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-45662 and analytical batch 880-45951 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-45662 and analytical batch 880-45951 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-4008-1) and FS02 (890-4008-2). 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-46271 and analytical batch 880-46323 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Client Sample ID: FS01

Date Collected: 02/02/23 12:40
Date Received: 02/02/23 15:57
Sample Depth: 1

Lab Sample ID: 890-4008-1
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		02/09/23 10:02	02/10/23 12:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/09/23 10:02	02/10/23 12:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/09/23 10:02	02/10/23 12:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/09/23 10:02	02/10/23 12:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/09/23 10:02	02/10/23 12:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/09/23 10:02	02/10/23 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*02/09/23 10:02*	*02/10/23 12:32*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*02/09/23 10:02*	*02/10/23 12:32*	*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			02/10/23 14:06	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			02/13/23 17:32	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		02/08/23 10:35	02/12/23 03:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/08/23 10:35	02/12/23 03:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/08/23 10:35	02/12/23 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*56*	*S1-*	*70 - 130*	*02/08/23 10:35*	*02/12/23 03:58*	*1*
o-Terphenyl	*66*	*S1-*	*70 - 130*	*02/08/23 10:35*	*02/12/23 03:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45.9**		4.96		mg/Kg			02/07/23 13:01	1

Client Sample ID: FS02

Date Collected: 02/02/23 12:45
Date Received: 02/02/23 15:57
Sample Depth: 1

Lab Sample ID: 890-4008-2
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		02/09/23 10:02	02/10/23 12:59	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/09/23 10:02	02/10/23 12:59	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/09/23 10:02	02/10/23 12:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/09/23 10:02	02/10/23 12:59	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/09/23 10:02	02/10/23 12:59	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/09/23 10:02	02/10/23 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*02/09/23 10:02*	*02/10/23 12:59*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Client Sample ID: FS02

Date Collected: 02/02/23 12:45
Date Received: 02/02/23 15:57
Sample Depth: 1

Lab Sample ID: 890-4008-2
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*02/09/23 10:02*	*02/10/23 12:59*	*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			02/10/23 14:06	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			02/13/23 17:32	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		02/08/23 10:35	02/12/23 04:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/08/23 10:35	02/12/23 04:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/08/23 10:35	02/12/23 04:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*54*	*S1-*	*70 - 130*	*02/08/23 10:35*	*02/12/23 04:19*	*1*
o-Terphenyl	*64*	*S1-*	*70 - 130*	*02/08/23 10:35*	*02/12/23 04:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**117**		4.97	mg/Kg			02/07/23 13:05	1

Client Sample ID: FS03

Date Collected: 02/02/23 12:50
Date Received: 02/02/23 15:57
Sample Depth: 1

Lab Sample ID: 890-4008-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:02	02/10/23 13:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:02	02/10/23 13:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:02	02/10/23 13:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/09/23 10:02	02/10/23 13:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/09/23 10:02	02/10/23 13:25	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/09/23 10:02	02/10/23 13:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*02/09/23 10:02*	*02/10/23 13:25*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*02/09/23 10:02*	*02/10/23 13:25*	*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			02/10/23 14:06	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			02/13/23 17:08	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Client Sample ID: FS03
Date Collected: 02/02/23 12:50
Date Received: 02/02/23 15:57
Sample Depth: 1

Lab Sample ID: 890-4008-3
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	<49.9	U *1	49.9		mg/Kg		02/07/23 09:24	02/10/23 20:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/07/23 09:24	02/10/23 20:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:24	02/10/23 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*63*	*S1-*	*70 - 130*	*02/07/23 09:24*	*02/10/23 20:32*	*1*
o-Terphenyl	*69*	*S1-*	*70 - 130*	*02/07/23 09:24*	*02/10/23 20:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42.3**		5.05		mg/Kg			02/14/23 17:59	1

Client Sample ID: FS04
Date Collected: 02/02/23 12:55
Date Received: 02/02/23 15:57
Sample Depth: 1

Lab Sample ID: 890-4008-4
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		02/09/23 10:02	02/10/23 13:52	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/09/23 10:02	02/10/23 13:52	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/09/23 10:02	02/10/23 13:52	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		02/09/23 10:02	02/10/23 13:52	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/09/23 10:02	02/10/23 13:52	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/09/23 10:02	02/10/23 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*02/09/23 10:02*	*02/10/23 13:52*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/09/23 10:02*	*02/10/23 13:52*	*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			02/13/23 18:51	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			02/13/23 17:08	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 *1	49.9		mg/Kg		02/07/23 09:24	02/10/23 21:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/07/23 09:24	02/10/23 21:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 09:24	02/10/23 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*63*	*S1-*	*70 - 130*	*02/07/23 09:24*	*02/10/23 21:38*	*1*
o-Terphenyl	*68*	*S1-*	*70 - 130*	*02/07/23 09:24*	*02/10/23 21:38*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Client Sample ID: FS04

Date Collected: 02/02/23 12:55
Date Received: 02/02/23 15:57
Sample Depth: 1

Lab Sample ID: 890-4008-4

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.7		5.00		mg/Kg			02/07/23 13:15	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4000-A-1-C MS	Matrix Spike	113	95
890-4000-A-1-D MSD	Matrix Spike Duplicate	116	94
890-4008-1	FS01	125	95
890-4008-2	FS02	130	98
890-4008-3	FS03	131 S1+	94
890-4008-4	FS04	135 S1+	90
LCS 880-45885/1-A	Lab Control Sample	102	94
LCSD 880-45885/2-A	Lab Control Sample Dup	107	100
MB 880-45843/5-A	Method Blank	76	89
MB 880-45885/5-A	Method Blank	79	88

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)
890-3990-A-1-D MS	Matrix Spike	74	78
890-3990-A-1-E MSD	Matrix Spike Duplicate	77	78
890-4008-1	FS01	56 S1-	66 S1-
890-4008-2	FS02	54 S1-	64 S1-
890-4008-3	FS03	63 S1-	69 S1-
890-4008-3 MS	FS03	74	71
890-4008-3 MSD	FS03	69 S1-	67 S1-
890-4008-4	FS04	63 S1-	68 S1-
LCS 880-45662/2-A	Lab Control Sample	117	125
LCS 880-45765/2-A	Lab Control Sample	105	119
LCSD 880-45662/3-A	Lab Control Sample Dup	117	129
LCSD 880-45765/3-A	Lab Control Sample Dup	98	116
MB 880-45662/1-A	Method Blank	68 S1-	81
MB 880-45765/1-A	Method Blank	80	101

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45843/5-A
Matrix: Solid
Analysis Batch: 45841

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45843

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/09/23 08:32	02/09/23 11:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/09/23 08:32	02/09/23 11:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/09/23 08:32	02/09/23 11:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/09/23 08:32	02/09/23 11:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/09/23 08:32	02/09/23 11:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/09/23 08:32	02/09/23 11:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/09/23 08:32*	*02/09/23 11:26*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*02/09/23 08:32*	*02/09/23 11:26*	*1*

Lab Sample ID: MB 880-45885/5-A
Matrix: Solid
Analysis Batch: 45841

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45885

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:02	02/10/23 01:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:02	02/10/23 01:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:02	02/10/23 01:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/09/23 10:02	02/10/23 01:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/09/23 10:02	02/10/23 01:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/09/23 10:02	02/10/23 01:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*02/09/23 10:02*	*02/10/23 01:46*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*02/09/23 10:02*	*02/10/23 01:46*	*1*

Lab Sample ID: LCS 880-45885/1-A
Matrix: Solid
Analysis Batch: 45841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45885

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09059		mg/Kg		91	70 - 130		
Toluene			0.100	0.08814		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.09457		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1802		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.09066		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 880-45885/2-A
Matrix: Solid
Analysis Batch: 45841

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45885

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1102		mg/Kg		110	70 - 130	20	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

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

Lab Sample ID: LCSD 880-45885/2-A
Matrix: Solid
Analysis Batch: 45841

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45885

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1025		mg/Kg		102	70 - 130	15	35
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2046		mg/Kg		102	70 - 130	13	35
o-Xylene			0.100	0.1077		mg/Kg		108	70 - 130	17	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-4000-A-1-C MS
Matrix: Solid
Analysis Batch: 45841

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45885

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.100	0.09720		mg/Kg		97	70 - 130
Toluene	<0.00202	U	0.100	0.09843		mg/Kg		98	70 - 130
Ethylbenzene	<0.00202	U	0.100	0.09404		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.201	0.1810		mg/Kg		90	70 - 130
o-Xylene	<0.00202	U	0.100	0.09133		mg/Kg		91	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-4000-A-1-D MSD
Matrix: Solid
Analysis Batch: 45841

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45885

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	0.09173		mg/Kg		93	70 - 130	6	35
Toluene	<0.00202	U	0.0990	0.09561		mg/Kg		97	70 - 130	3	35
Ethylbenzene	<0.00202	U	0.0990	0.09271		mg/Kg		94	70 - 130	1	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1767		mg/Kg		89	70 - 130	2	35
o-Xylene	<0.00202	U	0.0990	0.09056		mg/Kg		91	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

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

Lab Sample ID: MB 880-45662/1-A
Matrix: Solid
Analysis Batch: 45951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45662

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		02/07/23 09:24	02/10/23 19:28	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

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

Lab Sample ID: MB 880-45662/1-A
Matrix: Solid
Analysis Batch: 45951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45662

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 09:24	02/10/23 19:28	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 09:24	02/10/23 19:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*02/07/23 09:24*	*02/10/23 19:28*	*1*
o-Terphenyl	*81*		*70 - 130*	*02/07/23 09:24*	*02/10/23 19:28*	*1*

Lab Sample ID: LCS 880-45662/2-A
Matrix: Solid
Analysis Batch: 45951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45662

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1172		mg/Kg		117	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1011		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*125*		*70 - 130*

Lab Sample ID: LCSD 880-45662/3-A
Matrix: Solid
Analysis Batch: 45951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45662

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	896.9	*1	mg/Kg		90	70 - 130	27	20
Diesel Range Organics (Over C10-C28)			1000	1092		mg/Kg		109	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*129*		*70 - 130*

Lab Sample ID: 890-4008-3 MS
Matrix: Solid
Analysis Batch: 45951

Client Sample ID: FS03
Prep Type: Total/NA
Prep Batch: 45662

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	998	1142		mg/Kg		110	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1196		mg/Kg		117	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*71*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

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

Lab Sample ID: 890-4008-3 MSD — **Client Sample ID: FS03**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 45951 — **Prep Batch: 45662**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	1028		mg/Kg		98	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1141		mg/Kg		111	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*69*	*S1-*	*70 - 130*
o-Terphenyl	*67*	*S1-*	*70 - 130*

Lab Sample ID: MB 880-45765/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46052 — **Prep Batch: 45765**

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		02/08/23 10:35	02/11/23 20:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/08/23 10:35	02/11/23 20:28	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/08/23 10:35	02/11/23 20:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*02/08/23 10:35*	*02/11/23 20:28*	*1*
o-Terphenyl	*101*		*70 - 130*	*02/08/23 10:35*	*02/11/23 20:28*	*1*

Lab Sample ID: LCS 880-45765/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46052 — **Prep Batch: 45765**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	934.0		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	942.0		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Lab Sample ID: LCSD 880-45765/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46052 — **Prep Batch: 45765**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	922.0		mg/Kg		92	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	947.5		mg/Kg		95	70 - 130	1	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

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

Lab Sample ID: LCSD 880-45765/3-A
Matrix: Solid
Analysis Batch: 46052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45765

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: 890-3990-A-1-D MS
Matrix: Solid
Analysis Batch: 46052

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45765

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1111		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)	138		997	1391		mg/Kg		126	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 890-3990-A-1-E MSD
Matrix: Solid
Analysis Batch: 46052

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45765

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1127		mg/Kg		113	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	138		999	1421		mg/Kg		128	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	77		70 - 130
o-Terphenyl	78		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45573/1-A
Matrix: Solid
Analysis Batch: 45700

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			02/07/23 12:05	1

Lab Sample ID: LCS 880-45573/2-A
Matrix: Solid
Analysis Batch: 45700

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	253.7		mg/Kg		101	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-45573/3-A
Matrix: Solid
Analysis Batch: 45700

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	254.0		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-4006-A-1-B MS
Matrix: Solid
Analysis Batch: 45700

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	368		1240	1703		mg/Kg		108	90 - 110

Lab Sample ID: 890-4006-A-1-C MSD
Matrix: Solid
Analysis Batch: 45700

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	368		1240	1708		mg/Kg		108	90 - 110	0	20

Lab Sample ID: MB 880-46271/1-A
Matrix: Solid
Analysis Batch: 46323

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			02/14/23 15:57	1

Lab Sample ID: LCS 880-46271/2-A
Matrix: Solid
Analysis Batch: 46323

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	242.6		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-46271/3-A
Matrix: Solid
Analysis Batch: 46323

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	241.3		mg/Kg		97	90 - 110	1	20

Lab Sample ID: 890-4084-A-1-E MS
Matrix: Solid
Analysis Batch: 46323

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	940	F1	250	1150	F1	mg/Kg		84	90 - 110

Lab Sample ID: 890-4084-A-1-F MSD
Matrix: Solid
Analysis Batch: 46323

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	940	F1	250	1154	F1	mg/Kg		86	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

GC VOA

Analysis Batch: 45841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Total/NA	Solid	8021B	45885
890-4008-2	FS02	Total/NA	Solid	8021B	45885
890-4008-3	FS03	Total/NA	Solid	8021B	45885
890-4008-4	FS04	Total/NA	Solid	8021B	45885
MB 880-45843/5-A	Method Blank	Total/NA	Solid	8021B	45843
MB 880-45885/5-A	Method Blank	Total/NA	Solid	8021B	45885
LCS 880-45885/1-A	Lab Control Sample	Total/NA	Solid	8021B	45885
LCSD 880-45885/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45885
890-4000-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	45885
890-4000-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	45885

Prep Batch: 45843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-45843/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 45885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Total/NA	Solid	5035	
890-4008-2	FS02	Total/NA	Solid	5035	
890-4008-3	FS03	Total/NA	Solid	5035	
890-4008-4	FS04	Total/NA	Solid	5035	
MB 880-45885/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45885/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45885/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4000-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4000-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 46000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Total/NA	Solid	Total BTEX	
890-4008-2	FS02	Total/NA	Solid	Total BTEX	
890-4008-3	FS03	Total/NA	Solid	Total BTEX	
890-4008-4	FS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-3	FS03	Total/NA	Solid	8015NM Prep	
890-4008-4	FS04	Total/NA	Solid	8015NM Prep	
MB 880-45662/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45662/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45662/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4008-3 MS	FS03	Total/NA	Solid	8015NM Prep	
890-4008-3 MSD	FS03	Total/NA	Solid	8015NM Prep	

Prep Batch: 45765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Total/NA	Solid	8015NM Prep	
890-4008-2	FS02	Total/NA	Solid	8015NM Prep	
MB 880-45765/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

GC Semi VOA (Continued)

Prep Batch: 45765 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-45765/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3990-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3990-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-3	FS03	Total/NA	Solid	8015B NM	45662
890-4008-4	FS04	Total/NA	Solid	8015B NM	45662
MB 880-45662/1-A	Method Blank	Total/NA	Solid	8015B NM	45662
LCS 880-45662/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45662
LCSD 880-45662/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45662
890-4008-3 MS	FS03	Total/NA	Solid	8015B NM	45662
890-4008-3 MSD	FS03	Total/NA	Solid	8015B NM	45662

Analysis Batch: 46052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Total/NA	Solid	8015B NM	45765
890-4008-2	FS02	Total/NA	Solid	8015B NM	45765
MB 880-45765/1-A	Method Blank	Total/NA	Solid	8015B NM	45765
LCS 880-45765/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45765
LCSD 880-45765/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45765
890-3990-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45765
890-3990-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45765

Analysis Batch: 46203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Total/NA	Solid	8015 NM	
890-4008-2	FS02	Total/NA	Solid	8015 NM	
890-4008-3	FS03	Total/NA	Solid	8015 NM	
890-4008-4	FS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 45573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Soluble	Solid	DI Leach	
890-4008-2	FS02	Soluble	Solid	DI Leach	
890-4008-4	FS04	Soluble	Solid	DI Leach	
MB 880-45573/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45573/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45573/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4006-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4006-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 45700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-1	FS01	Soluble	Solid	300.0	45573
890-4008-2	FS02	Soluble	Solid	300.0	45573
890-4008-4	FS04	Soluble	Solid	300.0	45573
MB 880-45573/1-A	Method Blank	Soluble	Solid	300.0	45573

QC Association Summary

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

HPLC/IC (Continued)

Analysis Batch: 45700 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-45573/2-A	Lab Control Sample	Soluble	Solid	300.0	45573
LCSD 880-45573/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45573
890-4006-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	45573
890-4006-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	45573

Leach Batch: 46271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-3	FS03	Soluble	Solid	DI Leach	
MB 880-46271/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46271/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46271/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4084-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4084-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 46323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4008-3	FS03	Soluble	Solid	300.0	46271
MB 880-46271/1-A	Method Blank	Soluble	Solid	300.0	46271
LCS 880-46271/2-A	Lab Control Sample	Soluble	Solid	300.0	46271
LCSD 880-46271/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46271
890-4084-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	46271
890-4084-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46271

Lab Chronicle

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Client Sample ID: FS01
Date Collected: 02/02/23 12:40
Date Received: 02/02/23 15:57

Lab Sample ID: 890-4008-1
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	45885	02/09/23 10:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45841	02/10/23 12:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46000	02/10/23 14:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			46203	02/13/23 17:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45765	02/08/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46052	02/12/23 03:58	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	45573	02/06/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			45700	02/07/23 13:01	CH	EET MID

Client Sample ID: FS02
Date Collected: 02/02/23 12:45
Date Received: 02/02/23 15:57

Lab Sample ID: 890-4008-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	45885	02/09/23 10:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45841	02/10/23 12:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46000	02/10/23 14:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			46203	02/13/23 17:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45765	02/08/23 10:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46052	02/12/23 04:19	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	45573	02/06/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			45700	02/07/23 13:05	CH	EET MID

Client Sample ID: FS03
Date Collected: 02/02/23 12:50
Date Received: 02/02/23 15:57

Lab Sample ID: 890-4008-3
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			4.99 g	5 mL	45885	02/09/23 10:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45841	02/10/23 13:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46000	02/10/23 14:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			46203	02/13/23 17:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45662	02/07/23 09:24	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45951	02/10/23 20:32	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	46271	02/14/23 09:07	KS	EET MID
Soluble	Analysis	300.0		1			46323	02/14/23 17:59	CH	EET MID

Client Sample ID: FS04
Date Collected: 02/02/23 12:55
Date Received: 02/02/23 15:57

Lab Sample ID: 890-4008-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	45885	02/09/23 10:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45841	02/10/23 13:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46000	02/13/23 18:51	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Client Sample ID: FS04
Date Collected: 02/02/23 12:55
Date Received: 02/02/23 15:57

Lab Sample ID: 890-4008-4
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			46203	02/13/23 17:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	45662	02/07/23 09:24	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45951	02/10/23 21:38	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45573	02/06/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			45700	02/07/23 13:15	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 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

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 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

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 16 TWR 126H Fire

Job ID: 890-4008-1
SDG: 03C1558154

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4008-1	FS01	Solid	02/02/23 12:40	02/02/23 15:57	1
890-4008-2	FS02	Solid	02/02/23 12:45	02/02/23 15:57	1
890-4008-3	FS03	Solid	02/02/23 12:50	02/02/23 15:57	1
890-4008-4	FS04	Solid	02/02/23 12:55	02/02/23 15:57	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	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	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 16 TWR 126H Fire	Turn Around	☒ Routine ☐ Rush
Project Number:	03C1558154	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR #007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01	S	2/2/23	12:40	1'	C	1		✓	✓	✓
FS02	"	"	12:45	1'	C	1		✓	✓	✓
FS03	"	"	12:50	1'	C	1		✓	✓	✓
FS04	"	"	12:55	1'	C	1		✓	✓	✓

890-4008 Chain of Custody

Sample Comments

Incident ID: nAPP2233339417
Cost Center: 1665331001
AFE:

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		2-2-23 1552	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4008-1
SDG Number: 03C1558154

Login Number: 4008
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: 890-4008-1
SDG Number: 03C1558154

Login Number: 4008
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/06/23 08:40 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 D

NMOCD Notifications

From:	Hamlet, Robert, EMNRD
To:	Collins, Melanie
Cc:	Ben Belill; Ashley Ager; Tacoma Morrissey; DelawareSpills /SM; Green, Garrett J; Pennington, Shelby G; Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject:	(Extension Approval) - XTO - PLU 16 TWR 126H Fire - Incident Number nAPP2233339417
Date:	Friday, February 10, 2023 5:51:03 PM
Attachments:	image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2233339417**

Melanie,

Your request for an extension to **March 15th, 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: Friday, February 10, 2023 2:01 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; Ashley Ager <aager@ensolum.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Green, Garrett J <garrett.green@exxonmobil.com>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>
Subject: [EXTERNAL] XTO - Extension Request - PLU 16 TWR 126H Fire - Incident Number nAPP2233339417

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

All,

PLU 16 TWR 126H Fire (Incident Number nAPP2233339417)

XTO is requesting an extension for the current deadline of February 13, 2023 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the PLU 16 TWR 126H Fire (Incident Number nAPP2233339417). The release occurred on November 15, 2022, and site assessment activities have been completed. Delineation and excavation activities were completed on February 2, 2023, but analytical data is pending. In order to review the laboratory analytical results and submit a remediation work plan or closure report, XTO requests a 30-day extension until March 15, 2023.

Thank you,

Melanie Collins

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

Ben Belill

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, January 26, 2023 9:17 AM
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 1/30/23 - 2/3/23)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Jan 30, 2023.

- PLU 27 BD 163H / nAPP2226337852
- PLU 16 TWR 126H / nAPP2233339417
- Tiger Compressor Station / nAPP2235638568
- PLU C 2 Recycle Facility / nAPP2235646436

Thank you,

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

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

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
PLU 16 Twin Wells Ranch 126H
Incident Number NAPP2233339417

Photograph 1 Date: 12/8/2023
Description: Delineation Activities
View: East

Photograph 2 Date: 3/4/2024
Description: Delineation Activities
View: Northwest

Photograph 3 Date: 12/20/2024
Description: Additional excavation extent
View: Southwest

Photograph 4 Date: 1/8/2025
Description: Excavation backfilled
View: Southeast

ENSOLUM

APPENDIX C

Laboratory Analytical Reports and Chain of Custody Documentation

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 23, 2024

KATHERINE KHAN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU 16 TWR 126H

Enclosed are the results of analyses for samples received by the laboratory on 12/20/24 12:06.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 05	H247728-01	Soil	20-Dec-24 09:25	20-Dec-24 12:06
FS 06	H247728-02	Soil	20-Dec-24 10:20	20-Dec-24 12:06
SW 02	H247728-03	Soil	20-Dec-24 09:31	20-Dec-24 12:06

12/23/24 - Client changed the project number (see COC). This is the revised report and will replace the report sent earlier today, 12/23/24.

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

FS 05

H247728-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**352**		16.0	mg/kg	4	4122309	AC	23-Dec-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*110 %*	*71.5-134*		*4122021*	JH	*20-Dec-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4121939	MS	21-Dec-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4121939	MS	21-Dec-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4121939	MS	21-Dec-24	8015B	
Surrogate: 1-Chlorooctane			*110 %*	*48.2-134*		*4121939*	MS	*21-Dec-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*118 %*	*49.1-148*		*4121939*	MS	*21-Dec-24*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

FS 06

H247728-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**352**		16.0	mg/kg	4	4122309	AC	23-Dec-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*109 %*	*71.5-134*		*4122021*	JH	*20-Dec-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4122029	MS	21-Dec-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4122029	MS	21-Dec-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4122029	MS	21-Dec-24	8015B	
Surrogate: 1-Chlorooctane			*89.0 %*	*48.2-134*		*4122029*	MS	*21-Dec-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*94.3 %*	*49.1-148*		*4122029*	MS	*21-Dec-24*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

SW 02

H247728-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**368**		16.0	mg/kg	4	4122309	AC	23-Dec-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4122021	JH	20-Dec-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*110 %*	*71.5-134*		*4122021*	JH	*20-Dec-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4122029	MS	21-Dec-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4122029	MS	21-Dec-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4122029	MS	21-Dec-24	8015B	
Surrogate: 1-Chlorooctane			*89.5 %*	*48.2-134*		*4122029*	MS	*21-Dec-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*95.4 %*	*49.1-148*		*4122029*	MS	*21-Dec-24*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4122309 - 1:4 DI Water										
Blank (4122309-BLK1)				Prepared & Analyzed: 23-Dec-24						
Chloride	ND	16.0	mg/kg							
LCS (4122309-BS1)				Prepared & Analyzed: 23-Dec-24						
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (4122309-BSD1)				Prepared & Analyzed: 23-Dec-24						
Chloride	448	16.0	mg/kg	400		112	80-120	0.00	20	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4122021 - Volatiles										
Blank (4122021-BLK1)				Prepared & Analyzed: 20-Dec-24						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0545*		mg/kg	*0.0500*		*109*	*71.5-134*			
LCS (4122021-BS1)				Prepared & Analyzed: 20-Dec-24						
Benzene	2.24	0.050	mg/kg	2.00		112	82.8-130			
Toluene	2.11	0.050	mg/kg	2.00		105	86-128			
Ethylbenzene	2.07	0.050	mg/kg	2.00		103	85.9-128			
m,p-Xylene	4.08	0.100	mg/kg	4.00		102	89-129			
o-Xylene	2.08	0.050	mg/kg	2.00		104	86.1-125			
Total Xylenes	6.16	0.150	mg/kg	6.00		103	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0477*		mg/kg	*0.0500*		*95.4*	*71.5-134*			
LCS Dup (4122021-BSD1)				Prepared & Analyzed: 20-Dec-24						
Benzene	2.23	0.050	mg/kg	2.00		111	82.8-130	0.642	15.8	
Toluene	2.09	0.050	mg/kg	2.00		104	86-128	0.893	15.9	
Ethylbenzene	2.09	0.050	mg/kg	2.00		105	85.9-128	1.08	16	
m,p-Xylene	4.15	0.100	mg/kg	4.00		104	89-129	1.62	16.2	
o-Xylene	2.13	0.050	mg/kg	2.00		106	86.1-125	2.22	16.7	
Total Xylenes	6.27	0.150	mg/kg	6.00		105	88.2-128	1.82	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0491*		mg/kg	*0.0500*		*98.2*	*71.5-134*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4121939 - General Prep - Organics										
Blank (4121939-BLK1)				Prepared: 19-Dec-24 Analyzed: 21-Dec-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*64.9*		mg/kg	*50.0*		*130*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*73.8*		mg/kg	*50.0*		*148*	*49.1-148*			
LCS (4121939-BS1)				Prepared: 19-Dec-24 Analyzed: 21-Dec-24						
GRO C6-C10	190	10.0	mg/kg	200		95.2	81.5-123			
DRO >C10-C28	197	10.0	mg/kg	200		98.6	77.7-122			
Total TPH C6-C28	388	10.0	mg/kg	400		96.9	80.9-121			
Surrogate: 1-Chlorooctane	*70.9*		mg/kg	*50.0*		*142*	*48.2-134*			*S-05*
Surrogate: 1-Chlorooctadecane	*76.4*		mg/kg	*50.0*		*153*	*49.1-148*			*S-05*
LCS Dup (4121939-BSD1)				Prepared: 19-Dec-24 Analyzed: 21-Dec-24						
GRO C6-C10	196	10.0	mg/kg	200		98.1	81.5-123	2.96	13	
DRO >C10-C28	201	10.0	mg/kg	200		101	77.7-122	2.12	15.6	
Total TPH C6-C28	397	10.0	mg/kg	400		99.4	80.9-121	2.53	18.5	
Surrogate: 1-Chlorooctane	*71.6*		mg/kg	*50.0*		*143*	*48.2-134*			*S-05*
Surrogate: 1-Chlorooctadecane	*79.0*		mg/kg	*50.0*		*158*	*49.1-148*			*S-05*
Batch 4122029 - General Prep - Organics										
Blank (4122029-BLK1)				Prepared: 20-Dec-24 Analyzed: 21-Dec-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*56.0*		mg/kg	*50.0*		*112*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*61.5*		mg/kg	*50.0*		*123*	*49.1-148*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: PLU 16 TWR 126H Project Number: 03C1558154 Project Manager: KATHERINE KHAN Fax To:	Reported: 23-Dec-24 16:33

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4122029 - General Prep - Organics										
LCS (4122029-BS1)				Prepared: 20-Dec-24 Analyzed: 21-Dec-24						
GRO C6-C10	198	10.0	mg/kg	200		99.0	81.5-123			
DRO >C10-C28	201	10.0	mg/kg	200		101	77.7-122			
Total TPH C6-C28	399	10.0	mg/kg	400		99.9	80.9-121			
Surrogate: 1-Chlorooctane	*59.8*		mg/kg	*50.0*		*120*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*66.2*		mg/kg	*50.0*		*132*	*49.1-148*			
LCS Dup (4122029-BSD1)				Prepared: 20-Dec-24 Analyzed: 21-Dec-24						
GRO C6-C10	203	10.0	mg/kg	200		102	81.5-123	2.57	13	
DRO >C10-C28	206	10.0	mg/kg	200		103	77.7-122	2.37	15.6	
Total TPH C6-C28	409	10.0	mg/kg	400		102	80.9-121	2.47	18.5	
Surrogate: 1-Chlorooctane	*61.6*		mg/kg	*50.0*		*123*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*66.7*		mg/kg	*50.0*		*133*	*49.1-148*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Ensolum	**BILL TO** P.O. #:
Project manager: Katherine Kahn	Company: XTO Energy
Address: 3122 National Parks Hwy	Attn: Colton Brown
City: Carlsbad State: NM ZIP: 88220	Address: 3104 E Greene st.
Phone #: 303-319-9604	City: Carlsbad
Project #: ~~03C1558583~~ 03C1558154 *SR 12.23.24	State: NM Zip: 88220
Project Name: PLU 16 TWR 126H	Phone #:
Project Location: 32.207671,-103.783083	Fax #:
Sampler Name: Uriel Santillana	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	CHLORIDES	TPH	BTEX
H247728													12/20/24	925	X	X	X
1	FS05	C	1			X					X		↓	1020	↓	↓	↓
2	FS06	C	1			X					X			931			
3	SW02	C	1			X					X						

ANALYSIS REQUEST

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 12.20.24 Time: 1204	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	tmorrissey@ensolum.com kthomason@ensolum.com usantillana@ensolum.com kk@resolutionconsultantsllc.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 4.4 Corrected Temp. °C 3.8	Sample Condition Cool Intact ☑ Yes ☐ Yes ☐ No ☐ No	CHECKED BY: (Initials)

REMARKS: Incident Number: nAPP2233339417 *project # corrected per customer. SRodriguez 12.23.24

Turnaround Time: Standard ☐ Bacteria (only) Sample Condition
Rush 48 hr ☒ Cool Intact Observed Temp. °C
Thermometer ID #140
Correction Factor -0.6 ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 433236

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2233339417**
Incident Name	**NAPP2233339417 PLU 16 TWIN WELLS RANCH 126H @ 0**
Incident Type	**Fire**
Incident Status	**Remediation Closure Report Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU 16 TWIN WELLS RANCH 126H
Date Release Discovered	11/15/2022
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Fire
Did this release result in a fire or is the result of a fire	Yes
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Produced Water | Released: 2 BBL | Recovered: 1 BBL | Lost: 1 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Low pressure hose failed, spraying water onto light plant through open access door. The electrical panel shorted and a small fire ignited. Fire was immediately extinguished with fire extinguisher and no injuries were reported.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**More info needed to determine if this will be treated as a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(2) an unauthorized release of a volume that:** **(a) results in a fire or is the result of a fire.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/18/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	740
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	1740
GRO+DRO (EPA SW-846 Method 8015M)	1740
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	01/11/2023
On what date will (or did) the final sampling or liner inspection occur	12/20/2024
On what date will (or was) the remediation complete(d)	12/20/2024
What is the estimated surface area (in square feet) that will be reclaimed	1232
What is the estimated volume (in cubic yards) that will be reclaimed	39
What is the estimated surface area (in square feet) that will be remediated	1232
What is the estimated volume (in cubic yards) that will be remediated	39
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/18/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**416618**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**01/10/2025**
What was the (estimated) number of samples that were to be gathered	**4**
What was the sampling surface area in square feet	**800**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1232
What was the total volume (cubic yards) remediated	39
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	1232
What was the total volume (in cubic yards) reclaimed	39
Summarize any additional remediation activities not included by answers (above)	Soil delineation sampling, excavation activities, and confirmation sampling were conducted at the Site to address the November 15, 2022 release of produced water. Laboratory analytical results from confirmation samples collected following excavation indicated that all COC concentrations were in compliance with the Closure Criteria and the reclamation standard. Based on soil sample analytical results, no further remediation is required. The excavation was backfilled with material purchased locally, and the Site was recontoured to match pre-existing site conditions.

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/18/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 433236
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2233339417 PLU 16 TWIN WELLS RANCH 126H, thank you. This Remediation Closure Report is approved.	5/6/2025