ENSOLUM

January 15, 2024

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

Re: Closure Request Addendum
PLU Pierce Canyon 17 Fed SWD 001
Incident Number NAPP2216839215
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 site assessment, excavation, and soil sampling activities at the PLU Pierce Canyon 17 Fed SWD 001 (Site). A *Closure Request* submitted to the New Mexico Oil Conservation Division (NMOCD) for the Site on September 2, 2022 was denied on December 1, 2022. The NMOCD stated that the depth to groundwater assessment and delineation were not sufficient. This *Addendum* provides an update to the depth to groundwater determination activities as well as additional excavation and soil sampling conducted at the Site in response to the denial. Based on the additional depth to groundwater determination, excavation and soil sampling activities described below, XTO is submitting this *Addendum* and requesting no further action for Incident Number NAPP2216839215.

RELEASE BACKGROUND

The NMOCD portal lists the location of the release at 32.12593°, -103.90696°; however, following a review of the release information including geolocated photos of the release, the Site was determined to be located in Unit N, Section 17, Township 25 South, Range 30 East, in Eddy County, New Mexico at 32.126021°, -103.904223° and is associated with oil and gas exploration and production operations on Federal Land managed by Bureau of Land Management (BLM).

On June 5, 2022, a leaking valve and seal resulted in the release of approximately 6 barrels (bbls) of brine water during drilling operations. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 5.5 bbls of released brine water were recovered. XTO reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on June 17, 2022. The release was assigned Incident Number NAPP2216839215.

As documented in the *Closure Request* submitted for Incident Number NAPP2216839215, delineation and excavation activities were conducted at the Site in 2022 to address the impacted soil resulting from the June 5, 2022, brine release. Four preliminary soil samples (SS01 through SS04) were collected within the release extent from a depth of approximately 0.2 feet below ground surface (bgs) on July 26, 2022. In August 2022, soil samples SS05 through SS08 were collected at a depth of 0.5 feet bgs surrounding the release, and samples from potholes (PH01 through PH03) ranging in depth from 2 feet to 3 feet bgs were collected at the existing preliminary soil sample locations to assess the vertical extent of the release. Impacted soil was excavated from the release area at preliminary soil sample SS03. Composite soil samples FS01 and FS02 were collected from the floor of the excavation at a depth of 1-foot bgs. Due to the shallow depth of the excavation, sidewalls of the excavation were included in FS01 and FS02. The final excavation extent measured approximately 220 square feet. A total of roughly 10 cubic yards of impacted soil was removed during the excavation activities. Closure was requested on

September 2, 2022, based on laboratory analytical results for the delineation and excavation soil samples compliant with the Closure Criteria. The *Closure Request* is attached as Appendix A.

On December 1, 2022, NMOCD denied the *Closure Request* for Incident Number NAPP2216839215 for the following reasons:

- *When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.*

- *If you feel the depth to groundwater is >100', a shallow borehole can be drilled to 101' allowing for verification of the depth. If water is not visible after reaching bottom-hole and waiting 72 hours, the OCD will accept this as evidence. We would just need a copy of the driller's log.*

- *Please continue to horizontally delineate sample points to 600 mg/kg for chlorides and TPH to 100 mg/kg on the outer edges/periphery and include sample points in your next report after closure criteria limits have been met. Surface sample points and sidewalls on the edge of the release need to be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH for the spill to be horizontally delineated.*

CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

In response to NMOCD's denial of the *Closure Report* due to insufficient determination of depth to groundwater, XTO proceeded with the installation of a soil boring for determination of groundwater depth and confirmation of the Closure Criteria. During August 2023, a borehole permitted as New Mexico Office of the State Engineer (NMOSE) well C-04758, was advanced to a depth of 110 feet bgs via air rotary drill rig. The borehole was located approximately 0.46 miles southeast of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. No moisture or saturated soil indicative of a groundwater table was observed during drilling of the soil boring. 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 using hydrated bentonite chips. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix B.

Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site, the following Table I Closure Criteria were confirmed as appropriate for protection of groundwater, human health, and the environment at this Site:

- 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 EXCAVATION AND SOIL SAMPLING ACTIVITIES

In response to NMOCD's denial of the *Closure Request*, laboratory analytical results from previous sampling events were reviewed to determine areas requiring delineation to reclamation requirement. Chloride results from delineation samples SS01, PH01, SS02, PH02, PH03, and SS04 as well as floor excavation samples FS01 and FS02 exceeded the reclamation requirement. Figure 2 depicts delineation samples collected at the Site, and Figure 3 illustrates the location of excavation samples. These sampling locations reporting levels above the strictest Table I Closure Criteria were excavated between November 2023 and January 2024. Excavation activities were performed using a backhoe and transport vehicle. To direct excavation activities, Ensolum personnel field screened soil for volatile organic compounds (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively.

Following additional excavation activities to reclamation requirement in Fall 2023, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and 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. The excavation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Composite samples FS03 through FS22 were collected from the floor of the excavation at depths ranging from 3 feet to 4 feet bgs, and composite sidewall samples SW01 to SW06 were collected from ground surface to depths of 3 feet or 4 feet bgs. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit. The excavation extent and excavation soil sample locations are presented on Figure 3.

Results from the 2023 soil excavation sampling activities reported impacts above the strictest Table I Closure Criteria at sampling locations FS03, FS04, and SW06. An additional excavation was performed in January 2024 at these locations to 4 feet bgs. Composite samples FS03A, FS04A and SW07 were field screened and collected using the procedures described above and submitted for analysis of the above listed COCs to confirm in-situ soil was below reclamation criteria.

The final excavation extent at the Site measured approximately 3,260 square feet. A total of approximately 245 cubic yards of impacted soil was removed during excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico and Owl Landfill Services located in Jal, New Mexico. After completion of excavation sampling, the excavation area was backfilled in February 2024 with new material purchased from Owl Landfill Services. Photographic documentation of excavation and backfill activities is included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples SS05 through SS08 collected at 0.5 feet bgs and pothole soil sample PH01 collected at 3 feet bgs indicated all COC concentrations were compliant with the strictest Table 1 Closure Criteria, providing lateral and vertical delineation of the release. Laboratory analytical results for excavation soil samples FS03A, FS04A, and FS05 through FS22 collected at depths ranging from 3 feet bgs to 4 feet bgs and sidewall samples SW01 through SW05 and SW07 indicated all COC concentrations were also compliant with the reclamation requirement. Laboratory analytical results are summarized in Table 1, and the laboratory analytical reports from 2023 and 2024 are included in Appendix D. Appendix E provides correspondence email notification receipts associated with the subject release.

RECLAMATION PLAN

The release remained on the well pad that is currently in operation for oil and gas production purposes. As such, the release area is not expected to be reclaimed until the plugging and abandoning (P&Aing) of all wells associated with the tank battery and decommissioning of all production equipment, pipelines, and tank battery, which will be removed, and the well pad is reclaimed.

Per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation, any soil within the top 4 feet of the disturbed area would be assessed to meet the strictest Closure Criteria. A review of delineation and excavation soil analytical results confirm that soil has been remediated to reclamation requirements within the top 4 feet of soil and to Closure Criteria below the top 4 feet of soil. All other requirements of 19.2.100.67 NMAC will be addressed prior to, during, and after the P&Aing of the production well.

CLOSURE REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the June 5, 2022, release of brine water. Based on laboratory analytical results from the final excavation and delineation soil samples compliant with Closure Criteria and reclamation requirements where applicable, no further remediation is required. The excavation was backfilled with locally procured material in February 2024.

Initial response efforts, excavation of impacted soil, and natural attenuation have mitigated impacts at this Site. Depth to groundwater has been confirmed to be greater than 100 feet bgs within 0.5 miles of the Site and no other sensitive receptors were identified near the release extent. XTO believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number nAPP2216839215.

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
Associate Principal

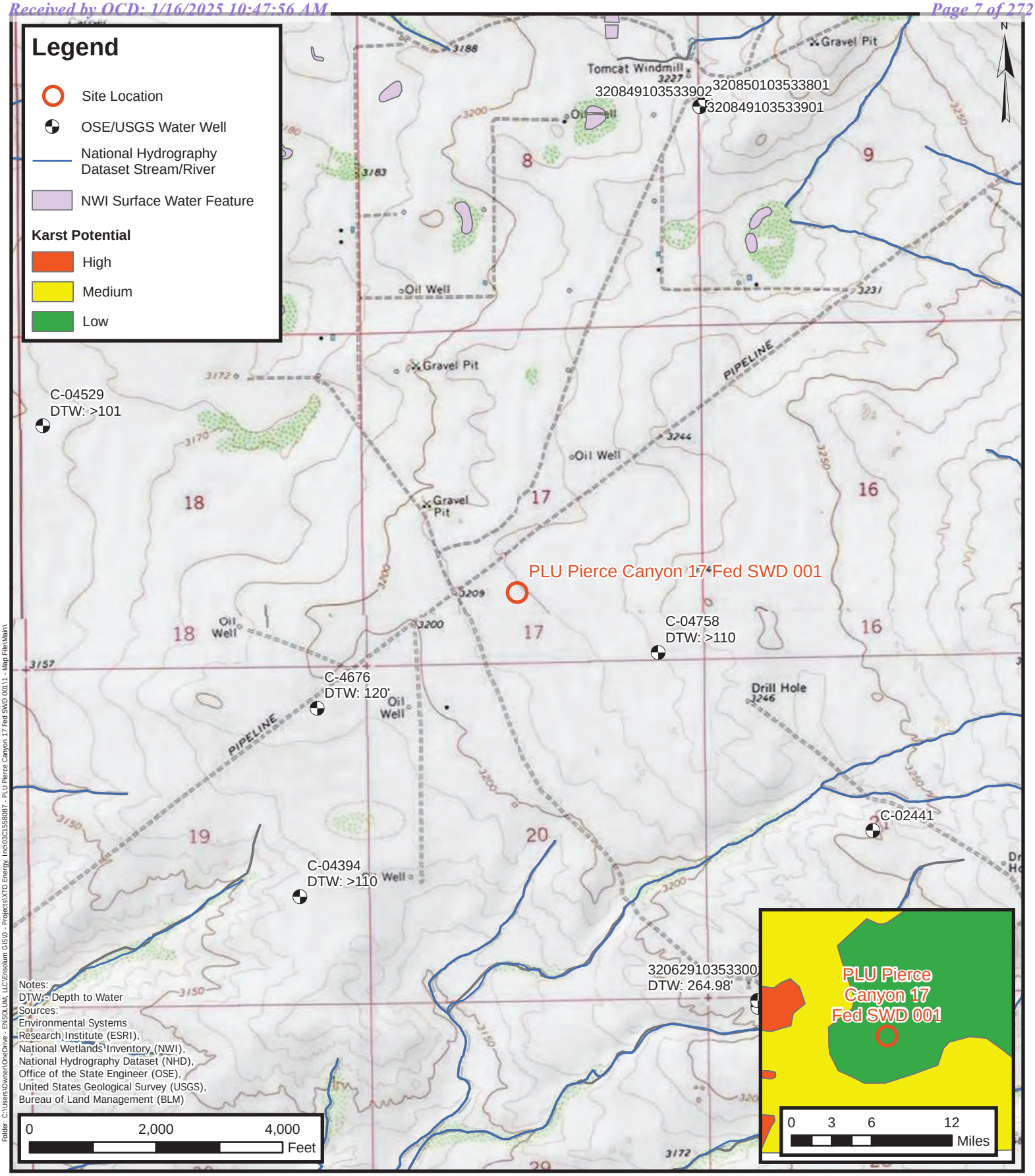
cc: Kaylan Dirkx, XTO
Colton Brown, XTO
Bureau of Land Management

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	September 2, 2022 *Closure Request*
Appendix B	Referenced Well Records

ENSOLUM

FIGURES



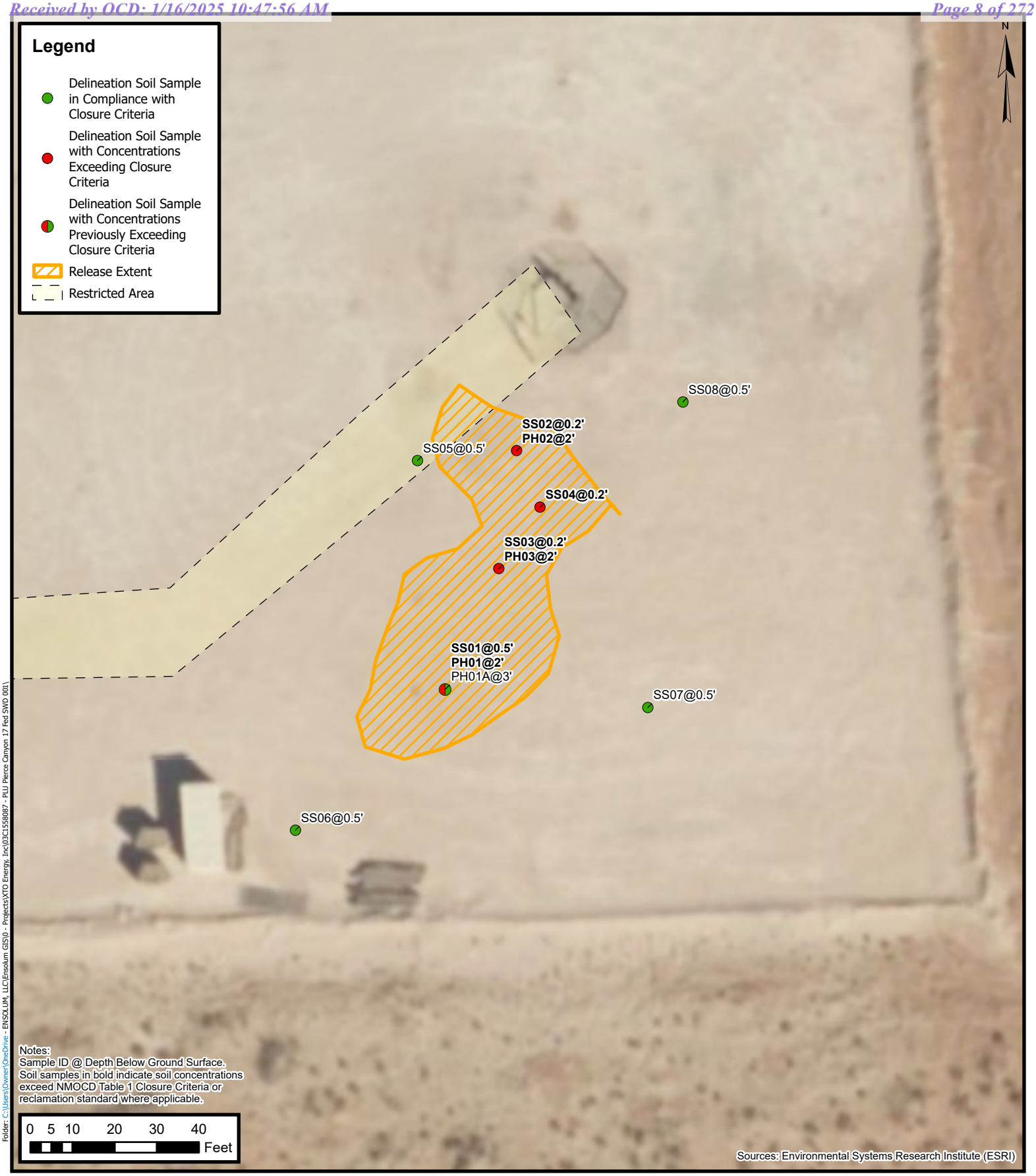
Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558087 - PLU Pierce Canyon 17 Fed SWD 001\1 - Map Files\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
PLU Pierce Canyon 17 Fed SWD 001
Incident Number: nAPP2216839215
Unit N, Sec 17, T25S, R30E
Eddy County, New Mexico

FIGURE 1



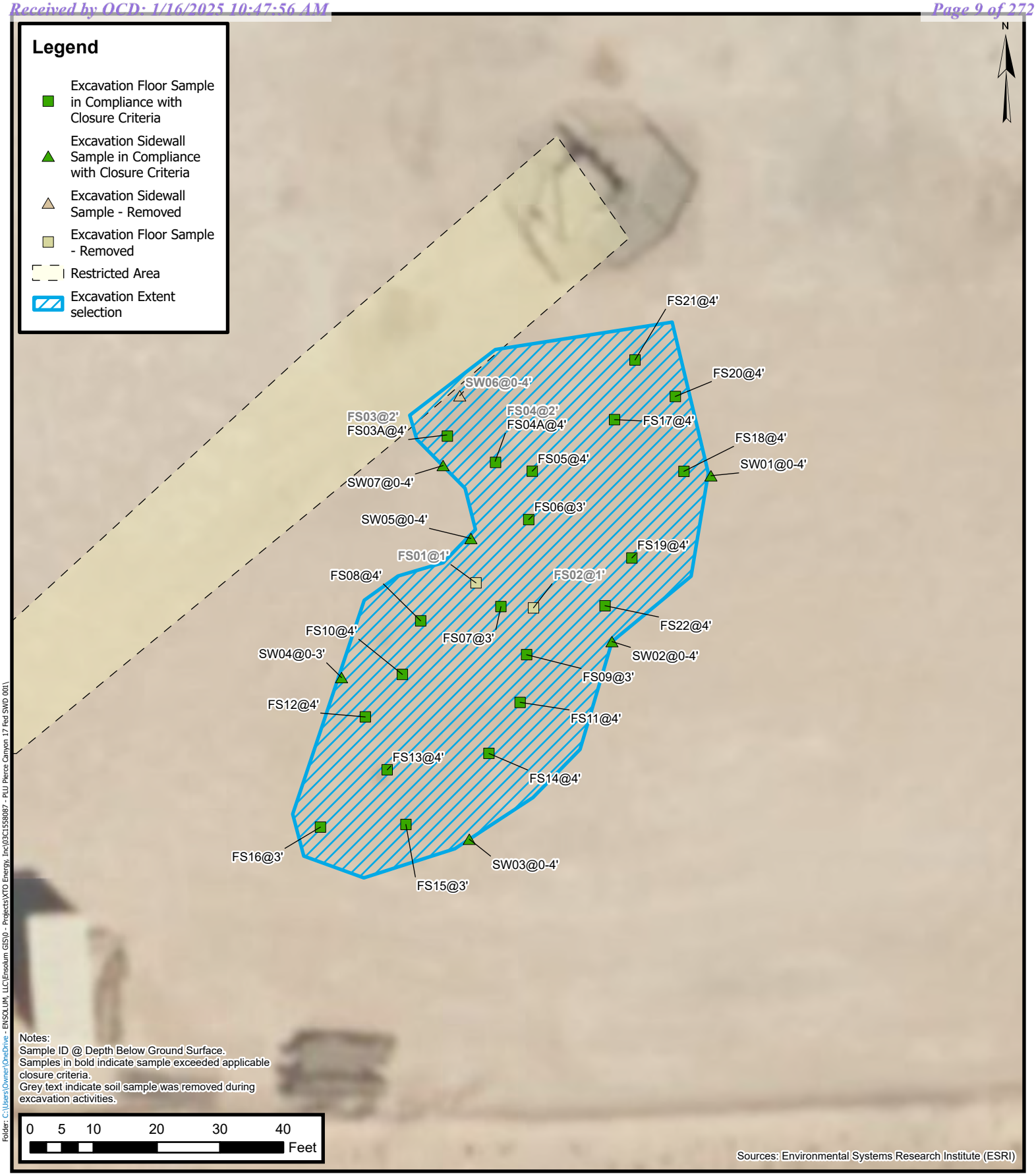
Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558087 - PLU Pierce Canyon 17 Fed SWD 001\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
PLU PIERCE CANYON 17 FED SWD 001
Incident Number: NAPP2216839215
Unit N, Sec 17, T25S, R30E
Eddy County, New Mexico

FIGURE 2



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
PLU PIERCE CANYON 17 FED SWD 001
Incident Number: NAPP2216839215
Unit N, Sec 17, T25S, R30E
Eddy County, New Mexico

FIGURE 3

ENSOLUM

TABLE

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Pierce Canyon 17 SWD 1
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Sample Analytical Results										
~~SS01~~	~~07/26/2022~~	~~0.2~~	~~<0.00202~~	~~<0.00403~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~19,000~~
~~PH01~~	~~08/24/2022~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~1,640~~
PH01	08/24/2022	3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	247
~~SS02~~	~~07/26/2022~~	~~0.2~~	~~<0.00199~~	~~<0.00398~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~13,600~~
~~PH02~~	~~08/24/2022~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~3,080~~
~~SS03~~	~~07/26/2022~~	~~0.2~~	~~<0.00198~~	~~<0.00397~~	~~<50.0~~	~~94.4~~	~~57.1~~	~~152~~	~~152~~	~~**36,900**~~
~~PH03~~	~~08/24/2022~~	~~2~~	~~<0.00202~~	~~<0.00404~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~9,770~~
~~SS04~~	~~07/26/2022~~	~~0.2~~	~~<0.00200~~	~~<0.00400~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~17,700~~
SS05	08/24/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	522
SS06	08/24/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	282
SS07	08/24/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	387
SS08	08/24/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	467
Excavation Soil Sample Analytical Results										
~~FS01~~	~~08/24/2022~~	~~1~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~2,730~~
~~FS02~~	~~08/24/2022~~	~~1~~	~~<0.00200~~	~~<0.00399~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~5,180~~
~~FS03~~	~~11/27/2023~~	~~2~~	~~<0.00200~~	~~<0.00401~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~**771**~~
FS03A	01/26/2024	4	<0.00198	<0.00397	<50.4	<50.4	<50.4	<50.4	<50.4	111
~~FS04~~	~~11/27/2023~~	~~2~~	~~<0.00200~~	~~<0.00399~~	~~<50.1~~	~~<50.1~~	~~<50.1~~	~~<50.1~~	~~<50.1~~	~~**1,940**~~
FS04A	01/26/2024	4	<0.00201	<0.00402	<49.6	<49.6	<49.6	<49.6	<49.6	98.7
FS05	12/01/2023	4	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	2,060
FS06	11/28/2023	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	141
FS07	11/27/2023	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	228
FS08	12/01/2023	4	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	1,890
FS09	11/27/2023	3	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	23.1
FS10	12/01/2023	4	<0.00200	<0.00399	<50.3	<50.3	<50.3	<50.3	<50.3	75.5
FS11	12/01/2023	4	<0.00200	<0.00401	<50.5	<50.5	<50.5	<50.5	<50.5	207
FS12	12/01/2023	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	21.1
FS13	12/01/2023	4	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	25.1
FS14	12/01/2023	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	248
FS15	11/28/2023	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	38.3
FS16	11/28/2023	3	<0.00200	<0.00401	<49.7	<49.7	<49.7	<49.7	<49.7	102
FS17	12/01/2023	4	<0.00200	<0.00399	<50.1	<50.1	<50.1	<50.1	<50.1	1,870

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Pierce Canyon 17 SWD 1
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
FS18	12/01/2023	4	<0.00200	<0.00401	<50.4	<50.4	<50.4	<50.4	<50.4	2,190
FS19	12/01/2023	4	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	2,110
FS20	12/01/2023	4	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	3,460
FS21	12/01/2023	4	<0.00200	<0.00401	<50.5	<50.5	<50.5	<50.5	<50.5	2,920
FS22	12/01/2023	4	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	230
SW01	12/01/2023	0-4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	36
SW02	11/29/2023	0-4	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	23.5
SW03	11/29/2023	0-4	<0.00198	<0.00396	<50.2	<50.2	<50.2	<50.2	<50.2	7.21
SW04	11/28/2023	0-3	<0.00198	<0.00396	<49.7	<49.7	<49.7	<49.7	<49.7	119
SW05	12/01/2023	0-4	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	565
~~SW06~~	~~12/01/2023~~	~~0-4~~	~~<0.00200~~	~~<0.00400~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~<50.3~~	~~**2,470**~~
SW07	01/26/2024	0-4	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	142

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Gray text indicates soil sample was removed during excavation activities

ENSOLUM

APPENDIX A

September 2, 2022 *Closure Request*

ENSOLUM

September 2, 2022

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

Re: Closure Request
PLU Pierce Canyon 17 Fed SWD 001
Incident Number NAPP2216839215
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this Closure Request to document site assessment, excavation, and soil sampling activities at the PLU Pierce Canyon 17 Fed SWD 001 (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 release of brine water. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request, describing site assessment, excavation, and delineation activities that have occurred and requesting no further action for Incident Number NAPP2216839215.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit N, Section 17, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.126021° N, 103.904223°W) and is associated with oil and gas exploration and production operations on Federal Land managed by Bureau of Land Management (BLM).

On June 5, 2022, a leaking valve and seal resulted in the release of approximately 6 barrels (bbls) of brine water during drilling operations. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 5.5 bbls of released brine water were recovered. XTO reported the release to the NMOCD on a Release Notification Form C-141 (Form C-141) on June 17, 2022. The release was assigned Incident Number NAPP2216839215.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on depth to groundwater data points existing in all cardinal directions, the absense of nearby shallow surface water, and the absence of underlying unstable geology. XTO acknowledges that there

is no existing water well with depth to groundwater data within ½ mile of the Site, which NMOCD prefers for depth to water estimates. However, 19.15.29.11 A.(2) indicates that a reasonable determination of probably depth to water can be generated using other tools and information. The Procedures for Implementation of the Spill Rule (19.15.29 NMAC) dated September 6, 2019, also provides that alternative applicable information can be presented and reviewed on a case-by-case basis. XTO requests NMOCD consider this estimate through a site-specific analysis of data provided.

On February 4, 2020, a New Mexico Office of the State Engineer (NMOSE) soil boring, C-04394, was drilled approximately 1.1 miles southwest of the Site. No groundwater was encountered in the soil boring. In addition, five NMOSE water wells and soil borings and four United States Geoglogical Survey (USGS) wells surround the Site in all cardinal directions at distances ranging from approximately 1.4 miles to 4.5 miles from the Site. One soil boring was only drilled to 55 feet bgs but it was dry and all other wells and soil borings confirm depth to groundwater in the area is greater that 100 feet bgs. There are no anomalies and the information provided indicates groundwater flows generally southwest, toward Brushy and Tucker draws and, ultimately, the Pecos River. Topography is consistently flat, representative of underlying uniform geology. The area is designated by BLM as low-potential for karst geology. Multiple depth to groundwater data points exist around the Site and there are no surface features indicative of the presence of shallow groundwater. All wells used for depth to water determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent dry wash, located approximately 3,975 feet south 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 to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

SITE ASSESSMENT ACTIVITIES

On July 26, 2022, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four preliminary soil samples (SS01 through SS04) were collected within the release extent from a depth of approximately 0.2 feet bgs to assess the impacts to soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site assessment and a photographic log 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 at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil sample SS03 indicated that chloride concentrations exceeded the Closure Criteria. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, excavation and delineation activities were warranted.

DELINEATION AND EXCAVATION SOIL SAMPLING ACTIVITIES

On August 24, 2022, Ensolum personnel were at the Site to oversee delineation and excavation activities. Surface samples SS05 through SS08 and samples from potholes (PH01 through PH03) advanced at the existing preliminary soil sample locations were collected within and around the release extent to assess the lateral and vertical extent of the release. Samples SS05 through SS08 were collected at a depth of 0.5 feet bgs laterally around the release. Potholes PH01 through PH03 were advanced within the release extent via backhoe at depths ranging from 2 feet to 3 feet bgs. Soil from the delineation samples was field screened for volatile aromatic hydrocarbons and chloride using a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The potholes and delineation soil sample locations are depicted on Figure 2.

Impacted soil was excavated from the release area as indicated by visible staining, field screening activities, and laboratory analytical results at preliminary soil sample SS03. Excavation activities were performed using a backhoe and transport vehicle. To direct excavation activities, Ensolum personnel screened soil for volatile aromatic hydrocarbons and chloride. Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and 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 and FS02 were collected from the floor of the excavation at a depth of of 1 foot bgs. Due to the shallow depth of the excavation, sidewalls of the excavation were included in FS01 and FS02. The excavation soil samples were collected, 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 220 square feet. A total of approximately 10 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico. After completion of confirmation sampling, the excavation areas were secured with fencing.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for pothole samples PH01 through PH03 collected at depths ranging from 2 feet bgs to 3 feet bgs indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for delineation soil samples SS05 through SS08, collected at 0.5 feet bgs and pothole PH01 collected at 3 feet bgs indicated TPH and chloride concentrations were compliant with the strictest Table 1 Closure Criteria, providing lateral and vertical delineation of the release. Laboratory analytical results for the excavation soil samples FS01 through FS02 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride

concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D. Appendix E provides correspondence email notification receipts associated with the subject release.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the June 5, 2022, release of brine water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. In addition, delineation soil samples SS05 through SS08 and PH01 at 3 feet bgs provide lateral and vertical delineation of the release to the strictest Table 1 Closure Criteria. Based on the soil sample analytical results, no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Excavation of impacted soil has mitigated impacts 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 NAPP2216839215.

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

Sincerely,
Ensolum, LLC

Tacoma Morrissey
Senior Geologist

Ashley L. Ager, M.S., P.G.
Program Director

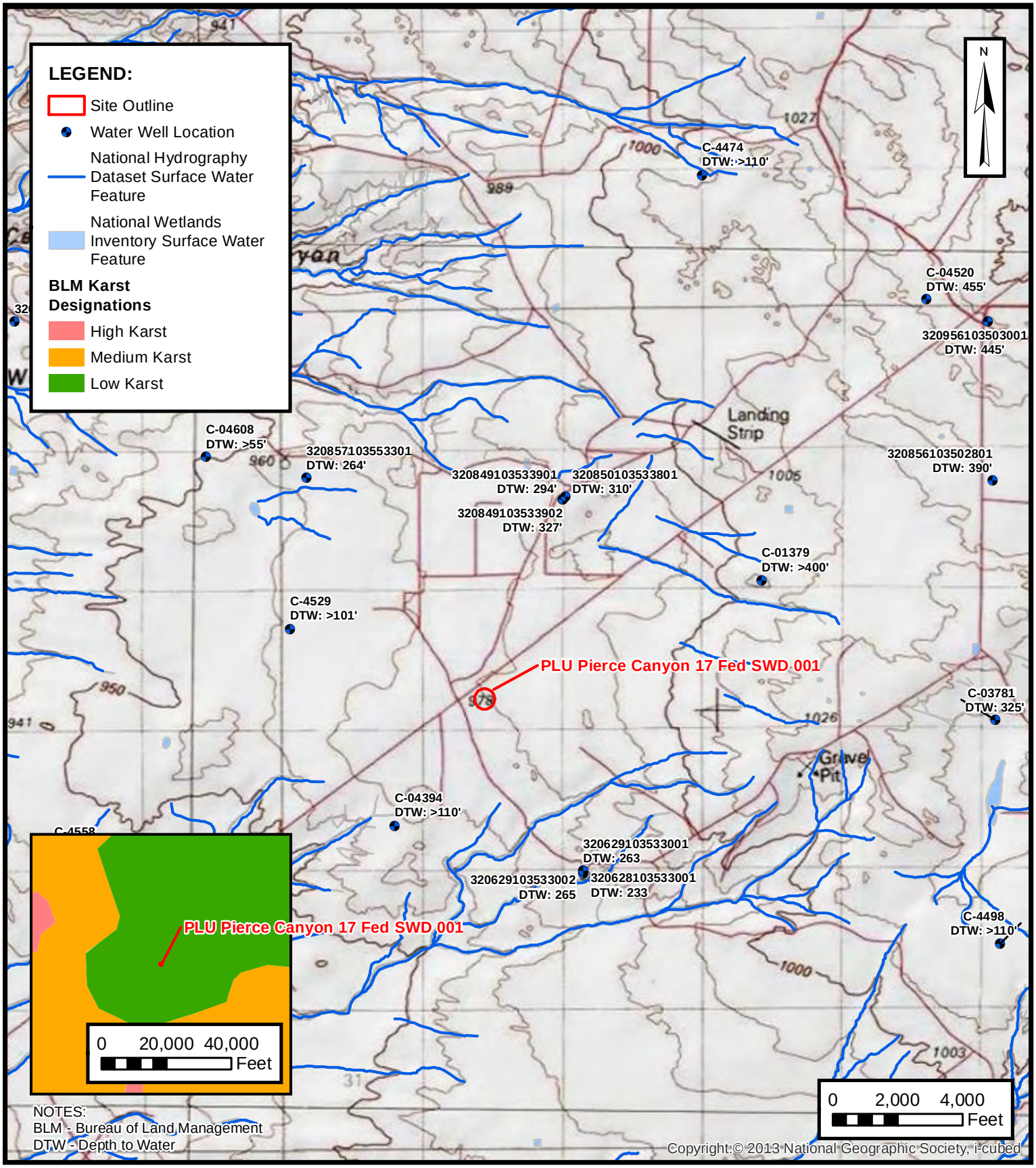
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

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	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications

ENSOLUM

FIGURES

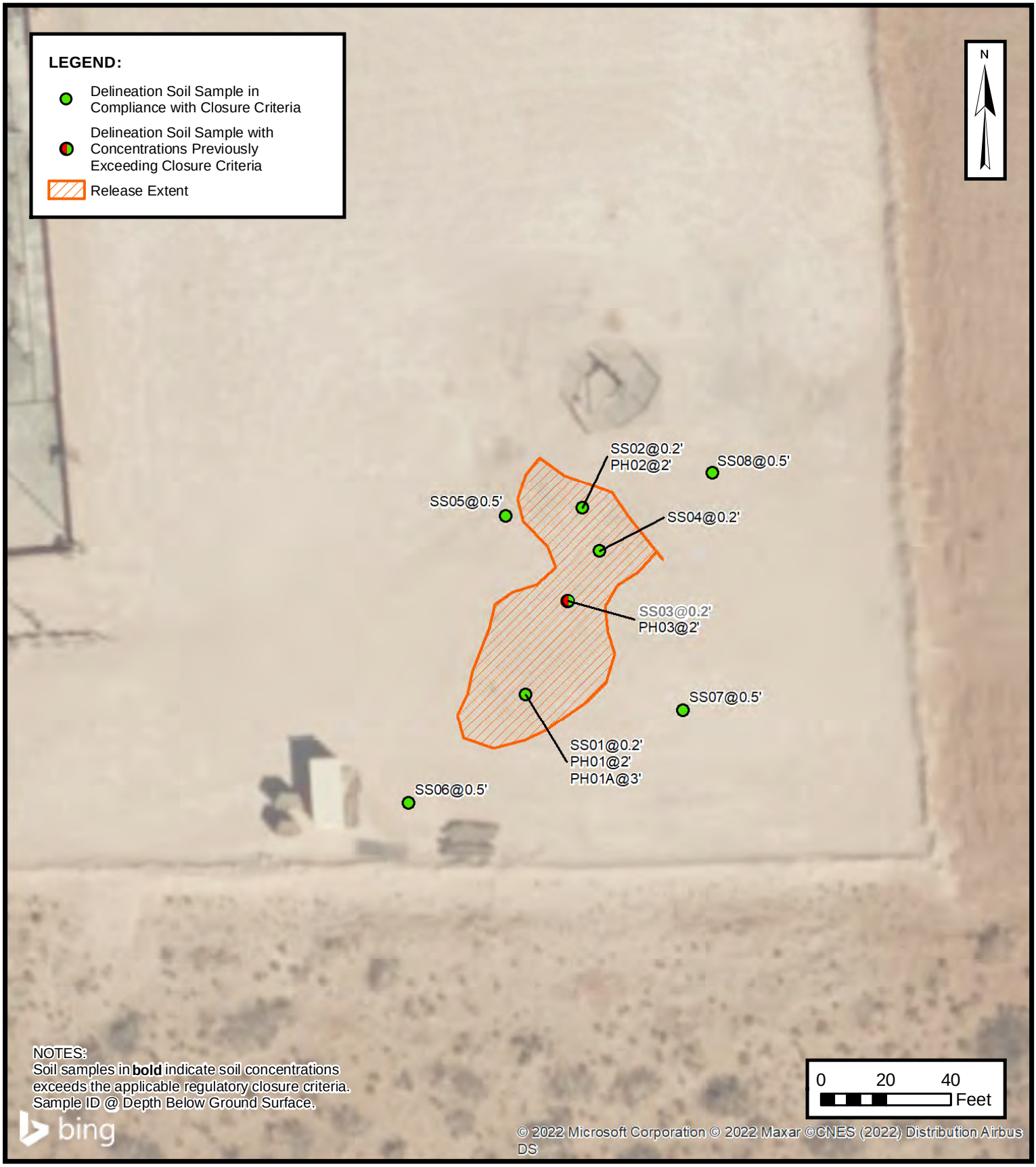


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
PLU PIERCE CANYON 17 FED SWD 001
NAPP2216839215
Unit N, Sec 17, T25S, R30E
Eddy County, New Mexico

FIGURE
1



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU PIERCE CANYON 17 FED SWD 001
NAPP2216839215
Unit N, Sec 17, T25S, R30E
Eddy County, New Mexico

FIGURE
2

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

EXCAVATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU PIERCE CANYON 17 FED SWD 001
NAPP2216839215
Unit N, Sec 17, T25S, R30E
Eddy County, New Mexico

FIGURE

3

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Pierce Canyon 17 SWD 1
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Sample Analytical Results										
SS01	07/26/2022	0.2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	19,000
PH01	08/24/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	1,640
PH01	08/24/2022	3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	247
SS02	07/26/2022	0.2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	13,600
PH02	08/24/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	3,080
SS03	07/26/2022	0.2	<0.00198	<0.00397	<50.0	94.4	57.1	152	152	**36,900**
PH03	08/24/2022	2	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	9,770
SS04	07/26/2022	0.2	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	17,700
SS05	08/24/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	522
SS06	08/24/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	282
SS07	08/24/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	387
SS08	08/24/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	467
Excavation Soil Sample Analytical Results										
FS01	08/24/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,730
FS02	08/24/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	5,180

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Gray text indicates soil sample was removed during excavation activities

ENSOLUM

APPENDIX A

Referenced Well Records

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	2RP-3790
Logged By: FS	**Method:** SONIC
Lat/Long:	**Field Screening:** ~~CHLORIDES, PID~~
Hole Diameter: 4"/6"	**Total Depth:** 110'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: No sampling, lithology remarks only

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					1			hydravac excavated (refusal @ 1')
					2			2.5' SAND, dry, well graded, coarse-fine grain, light brwn-tan, no stain, no odor
D			N		3		SW-S	
					4			5' few silty sand pockets, reddish brwn, no plas, non cohesive
D			N		5			
					6			6' SAND, dry, poorly graded, light brwn-brwn, fine-very fine
					7		SP	
D			N		8			
					9			7.5' some mod consol ss light brwn-brwn, sub rounded
D			N		10		SW-S	
					11			10' abundant ss 10-11' color change
					12			12' ss gravel absent tan-off white
					13		SP	16' abundant ss gravel (mod consol) 13' back to light brwn-brwn
					14			19' abundant - some
D			N		15			
					16			21.5' sandstone, light brwn-tan, dry, mod well consolidated, abundant
D			N		17		SW-S	
					18			23' sandstone chunks absent
D			N		19			
					20			
					21			
D			N		22			
					23			
					24			
D			N		25			

2.5-4
9-12

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: MW01 C 4394	Date: 2/4/2020
Project Name: PLU 423	RP Number: ~~2RP-2674~~ 2RP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS / Method: SONIC
Lat/Long:	Field Screening: ~~CHLORIDES, PID~~ / Hole Diameter: 4"/6" / Total Depth: 110'
Comments:	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					26			
					27			27.5' SAND, dry, light brwn-tan, poorly graded, fine-very fine grey-grey
D			N		28		SP	30' trace light ~~brwn-tan~~ caliche pebbles (gravel), rounded
					29			
D			N		30			31' caliche pebbles absent
					31			
D			N		32			31.5' color change light brwn-reddish brwn
					33			
M			N		34			33-34' abundant ss chunks, mod consol
					35			35' ss chunks absent
					36			
M			N		37		SW-SM	36' some clay pockets, reddish brwn, few pebbles, rounded-subrounded, grey-light grey, few laminations w/ clay, caliche, dolomite?
					38			
					39			
M			N		40			
					41			
M			N		42			42.5' clay laminations, trace, reddish brwn
					43			
					44			44' color change, light brwn-tan, SILTY sand
M			N		45		SP-SM	44.5' some SILTY sand predomin, light brwn-tan, no plasticity, non cohesive, trace high plas clay nodules, reddish brwn
					46			
D			N		47			
					48			48.5' low plas clay band, orange (35-40 mm)
					49			49.5' faint yellow band, (15-20 mm)
D			N		50			

rig adding water

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	ZRP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS / Method: sonic
Lat/Long: / Field Screening: ~~CHLORIDES, PID~~	Hole Diameter: 4"/6" / Total Depth: 110'
Comments:	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		51		SP	51.5' trace, high plas clay nodules
					52			
D			N		53			53-54' some silty ss, poorly consolidated
					54			
M			N		55			55.5' color change tan-grey band (30mm)
					56			
M			N		57	X		59.5' SILTY sand, light brwn-brwn, moist, no plas, non cohesive, no stain
					58			
M			N		59			
					60		SM	62' more consolidated
					61			64' dark brwn color change, silty clay nodules
					62			
D			N		63		SM-S	66' pockets of silty clay brwn-green
M			N		64			
					65			68' low plas clay pockets some, few low plas clay laminations
					66			
M			N		67			
					68			71' SILTY sand, dry, no plas, non cohesive, light brwn-tan
M			N		69			
					70			74' trace caliche pebbles, light grey-grey
D			N		71		SM	
					72			
					73			
					74			
D			N		75			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW01 C 4394	2/4/2020
Project Name:	**RP Number:**
PLU 423	2RP-3790
Logged By: FS, BB	**Method:** sonic
Hole Diameter: 6"/4"	**Total Depth:** 110'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: ~~CHLORIDES, PID~~

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
						76	SM	76.5' trace low plas clay nodules, reddish brwn
D			N			77		
						78		82' CLAYSTONE, moist, brwn-greenish grey, low plasticity, cohesive, no stain, no odor mod consolidated
D			N			79		
						80		
D			N			81		85' SILTY sand, dry, light brwn - brwn, no plas, non cohesive, no stain, no odor
						82	CL-S	
M			N			83		
						84		
						85	SM	87' color change tan - off white
D			N			86		88' light brwn - brwn
						87	SM-S	
D			N			88		87' SILTSTONE, dry, w/ clay pockets, low plas
						89		
D			N			90		
						91		91' abundant clay pockets
						92		94.5' band yellow low plas clay
D			N			93		
						94	SM	
D			N			95	CH	end@95' 2/4/2020
						96		2/5/20
M			N			97		95'-101 CLAY, moist, brown-dark brown, high plasticity, cohesive, some tan clay laminations, no stain, no odor.
M			N			98		98'-99' tan fine grain sandstone stringer.
D			N			99		
M			N			100		

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
MW0 C 4394	2/5/2020
Project Name:	**RP Number:**
PLU 423	2RP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BP / Method: Sonic
Lat/Long: / Field Screening: CHLORIDES, PID.	Hole Diameter: 6"/4" / Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		101		CH / SP-S	101'- 105' SANDSTONE, tan - light brown, dry, moderately consolidated, calcareous cemented, poorly graded, no stain, no odor.
D			N		102			
D			N		103			
M			N		104			
D			N		105		CH	105'- 110' CLAY, moist, dark brown - brown, high plasticity, cohesive, trace tan sand laminations, no stain, no odor.
D			N		106			
D			N		107			
M			N		108			107'- 109' tan - light brown well consolidated fine grain sandstone stringer.
					109			
					110		TD @ 110'	TD @ 110'
					111			
					112			
					113			
					114			
					115			
					116			
					117			
					118			
					119			
					120			
					121			
					122			
					123			
					124			
					125			

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Attention current WaterAlert users: NextGen WaterAlert is replacing Legacy WaterAlert. You must take action before 9/30/2022 to retain your alerts. Read more.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320629103533002

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

USGS 320629103533002 25S.30E.21.33342 A

Eddy County, New Mexico
Latitude 32°06'29", Longitude 103°53'30" NAD27
Land-surface elevation 3,209 feet above NAVD88
The depth of the well is 280 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1949-03-10		D	62610		2939.36	NGVD29	P	Z		
1949-03-10		D	62611		2941.00	NAVD88	P	Z		
1949-03-10		D	72019	268.00			P	Z		
1992-11-06		D	62610		2942.38	NGVD29	P	S		
1992-11-06		D	62611		2944.02	NAVD88	P	S		
1992-11-06		D	72019	264.98			P	S		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface

Section	Code	Description
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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

Accessibility FOIA Privacy Policies and Notices

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

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-08-30 11:40:58 EDT
0.28 0.25 nadww01

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-4529

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°	8'	2.07"	N
	LONGITUDE	103°	55'	42.27"	W

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

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

NW NW Sec. 18 T25S R30E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
05/14/2021	05/14/2021	temporary well material	101	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	101	±6.5	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-4529	POD NO.	1	TRN NO.	692934
LOCATION	Exp1	25S.30E.18.131		WELL TAG ID NO.	—

PAGE 1 OF 2

OSE DTJ JUN 10 2021 PM 2:45

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	4	4	SAND, poorly graded, fine-very grained, caliche gravel, Reddish-brown, dry	Y ✓ N	
4	29	25	CALICHE, poorly consolidated, with sand medium grained, tan-off white, dry	Y ✓ N	
29	39	10	SAND, poorly graded, fine-very grained, some caliche gravel, Tan-brown, dry	Y ✓ N	
39	54	15	SILTY SAND, poorly graded, very- fine grained, Light brown, dry	Y ✓ N	
54	59	5	SILTY SAND, poorly graded, very- fine grained, caliche gravel Light brown, dr	Y ✓ N	
59	73	14	SANDY CLAY, very-fine grained sand, low plasticity, Brown- Red Brown, moi	Y ✓ N	
73	79	6	CLAYEY SAND, low plasticity, very-fine grained sand, Brown/Red Brown, mo	Y ✓ N	
79	83	4	SANDY CLAY, very-fine grained sand, low plasticity, Brown- Dark Brown, mo	Y ✓ N	
83	94	9	SANDY CLAY, very-fine grained sand, low plasticity, Reddish Brown, moist	Y ✓ N	
94	99	5	SANDY CLAY, very-fine grained sand, low plasticity, Brown-Dark Brown, dry	Y ✓ N	
99	101	2	SANDY CLAY, very-fine grained sand, low plasticity, Earth Brown, dry	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, Carmelo Trevino, Cameron Pruitt

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 — 06/09/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4525	POD NO. 1	TRN NO. 692934
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

OSE DIT JUN 10 2021 PM 2:45

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Attention current WaterAlert users: NextGen WaterAlert is replacing Legacy WaterAlert. You must take action before 9/30/2022 to retain your alerts. Read more.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320849103533902

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

USGS 320849103533902 25S.30E.08.242221A

Eddy County, New Mexico
Latitude 32°08'49", Longitude 103°53'39" NAD27
Land-surface elevation 3,230 feet above NAVD88
The depth of the well is 500 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1961-06-14		D	62610		2896.80	NGVD29	P		Z	
1961-06-14		D	62611		2898.45	NAVD88	P		Z	
1961-06-14		D	72019	331.55			P		Z	
1998-01-28		D	62610		2901.82	NGVD29	1		S	
1998-01-28		D	62611		2903.47	NAVD88	1		S	
1998-01-28		D	72019	326.53			1		S	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface

Section	Code	Description
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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

Accessibility FOIA Privacy Policies and Notices

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

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-08-30 11:38:26 EDT
1.59 0.41 nadww02

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Attention current WaterAlert users: NextGen WaterAlert is replacing Legacy WaterAlert. You must take action before 9/30/2022 to retain your alerts. Read more.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320857103553301

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

USGS 320857103553301 25S.30E.07.112331

Eddy County, New Mexico
Latitude 32°08'57", Longitude 103°55'33" NAD27
Land-surface elevation 3,169 feet above NAVD88
The depth of the well is 385 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1959-02-05		D	62610		2903.75	NGVD29	1	Z		
1959-02-05		D	62611		2905.37	NAVD88	1	Z		
1959-02-05		D	72019	263.63			1	Z		
1959-03-07		D	62610		2904.08	NGVD29	1	Z		
1959-03-07		D	62611		2905.70	NAVD88	1	Z		
1959-03-07		D	72019	263.30			1	Z		
1987-10-20		D	62610		2903.13	NGVD29	1	Z		
1987-10-20		D	62611		2904.75	NAVD88	1	Z		
1987-10-20		D	72019	264.25			1	Z		
1992-11-06		D	62610		2904.38	NGVD29	1	S		
1992-11-06		D	62611		2906.00	NAVD88	1	S		
1992-11-06		D	72019	263.00			1	S		
1998-01-28		D	62610		2903.26	NGVD29	1	V		
1998-01-28		D	62611		2904.88	NAVD88	1	V		
1998-01-28		D	72019	264.12			1	V		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	V	Calibrated electric-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

SF

Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

OFFICE OF STATE ENGINEER SANTA FE, NEW MEXICO '01 SEP 4 PM 1 40

Section 1. GENERAL INFORMATION

(A) Owner of well James R Lofton Owner's Well No. _____
Street or Post Office Address 1668 CR 3
City and State Clovis, NM 88101

Well was drilled under Permit No. CC-1379 and is located in the:

a. NE ¼ SE ¼ SW ¼ ____ ¼ of Section 18 Township 1N Range 35E N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in Curry County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor Jimmy F Roman License No. WD-395

Address 1300 Piedmont Dr. Clovis, NM 88101

Drilling Began Apr 30, 01 Completed Apr 30,01 Type tools Rotary Size of hole 8 1/2

Elevation of land surface or _____ at well is _____ ft. Total depth of well 205 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 169 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
169	196	27	River Sand Course	
196	205	09	Red Bed	

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
5"	2,324	0	0	205	205	None	185	205

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

Section 5. PLUGGING RECORD

Plugging Contractor _____
Address _____
Plugging Method _____
Date Well Plugged _____
Plugging approved by:
_____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received August 16, 2001

Quad _____ FWL _____ FSL _____

File No. CC-1379 Use Dom Location No. 1N.35E.18.342

T # 209282

Section 6. LOG OF HOLE

Depth in Feet		Thickness in Feet	Color and Type of Material Encountered
From	To		
0	4	04	Top Soil
4	32	28	Calchie
32	109	77	Sand
109	117	08	Red Clay
117	122	05	River Sand & Gravel
122	142	20	River Sand
142	163	20	River Sand & Gravel
163	196	33	River Sand Course
196	205	09	Red Bed

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Jimmy Romay
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

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).
C-4608	n/a	POD-1

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Lucid Energy Delaware, LLC	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
201 S. 4th St.	Artesia	NM	88210

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	9	5.31	N
	LONGITUDE	103	56	19.42	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

NE NE NW Sec 12 T25S R29E, NMPM

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)
04/19/2022	04/19/2022	temporary well material	±55	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DATE STATIC MEASURED: 04/19/2022, 4/26/20

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

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

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

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)
			n/a				

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
			n/a		

OSE DII MAY 9 2022 PM1:23

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	C-4608	POD NO.	POD1	TRN NO.	723248
LOCATION	12 25S 29E	1.1.2		WELL TAG ID NO.	NA

PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	SAND, dary, brown, poorly graded,non plastic fines, fine sand, fine grains.	Y ✓ N	
4	19	15	SAND, well graded sand with gravel and silt, light brown color,abundant gravel	Y ✓ N	
19	40	21	SANDSTONE, fine grains, redish brown, dry, well graded, less consolidation,we	Y ✓ N	
40	50	10	CLAYSTONE, moist, brown-reddish in color, well graded, well sorted,abundant	Y ✓ N	
50	55	5	CLAY, moist, dark brown color, well graded, well sorted, silt, high plasticity	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	
				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: Drilled soil boring, landed temporary well material. Removed well material and plugged boring with back fill and upper 20 feet hydrated bentonite

OSE DII MAY 9 2022 PM1:29

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

Carmelo Trevino, Cameron Pruitt

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 — 05/09/2022

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	C-4608	POD NO.	POD1	TRN NO.	723248	
LOCATION	12 25S 29E	1.1.2		WELL TAG ID NO.	NA	PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): POD-1 (Renumbered C-3832-POD1)	OSE FILE NUMBER(S): C 3781 (Exploratory) (Renumbered C-3832)
WELL OWNER NAME(S): BOPCO, L.P.	PHONE (OPTIONAL): (817) 390-8662
WELL OWNER MAILING ADDRESS: 201 N Main St Suite 2900	CITY: Fort Worth STATE: TX ZIP: 76102

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	07	26.2	N
LONGITUDE	103	50	28.5	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

SE1/4SW1/4SW1/4SW1/4 of Section 13, Township 25 South, Range 30 East, in the NW corner of a well pad.

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
331	Joel H. Stewart	SBQ Drilling, LLC

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
01-08-15	01-10-15	720	±720	

COMPLETED WELL IS: (•) ARTESIAN ( ) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 325

DRILLING FLUID: ( ) AIR (•) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

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	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	340	14.75	ASTM A53B	Welded	8.625	0.322	---
340	720	14.75	304 Stainless Steel	Welded	8.625	0.25	1/16
0	19	19	ASTM A53B	---	16	0.25	---

2015 FEB 19 PM 2:3[illegible] STATE ENGINEER OFFICE

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
0	95	14.75	Sand Mix Ready Mix	68.21	grav. tremie meas.
95	190	14.75	Hydrated Bentonite Chips	68.21	grav. tremie meas.
190	210	14.75	Neat Cement Grout	14.36	tremie pipe
210	235	14.75	Hydrated Bentonite Chips	17.95	grav. tremie meas.
235	720	14.75	6/9 Silica Sand	348.24	tremie pipe

FOR OSE INTERNAL USE Renumbered from C-3781-POD1 WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER C-3832	POD NUMBER POD1	TRN NUMBER 555114
LOCATION 25.30.13.3334		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	50	50	Cemented Sand, light tan, sub-angular	○ Y ○ N	
50	120	70	Fine Sand, light tan, sub-angular to rounded	○ Y ○ N	
120	200	80	Fine sand, tan to orange, sub-angular to rounded	○ Y ○ N	
200	370	170	Fine sand, brownish orange, sub-angular to rounded	◉ Y ○ N	
370	390	20	Medium sand, light tan, sub-angular to rounded	◉ Y ○ N	
390	410	20	Medium sand, reddish brown, sub-angular to rounded	◉ Y ○ N	
410	440	30	Sandstone with shale, brownish orange, med-coarse sand	◉ Y ○ N	
440	460	20	Silty Clay with some sand and shale, brownish red	◉ Y ○ N	
460	470	10	Coarse Sand with some silty clay and shale, brownish red	◉ Y ○ N	
470	490	20	Silty Clay with some sand and shale, brownish red	◉ Y ○ N	
490	500	10	50% Silty Clay, 50% Fine Sand, reddish brown	◉ Y ○ N	
500	510	10	Fine Sand, tannish orange, sub-angular to rounded	◉ Y ○ N	
510	530	20	Clayey Sand, reddish brown, sub-angular	◉ Y ○ N	
530	660	130	Sandy Clay with some shale, reddish brown	◉ Y ○ N	
660	690	30	Clayey Fine Sand with shale, reddish brown	◉ Y ○ N	
690	700	10	Sandy Clay, dark red, 5% shale	◉ Y ○ N	
700	720	20	Clayey Fine Sand, reddish brown, 5% shale	◉ 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: TBD by pump test

TOTAL ESTIMATED WELL YIELD (gpm): TBD

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:

Pump test will be performed at a later time.
Hydrated Bentonite Chips and Sand Mix Ready Mix were placed by gravity and tagged with tremie pipe.

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2015 FEB 19 PM 2:37

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

Silverio Galindo, Gabriel Armijo, Pedro Pizano

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 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Joel H. Stewart — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

2-13-15 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	C-3832	POD NUMBER	POD1	TRN NUMBER	555114
LOCATION	25.30.13.3334				PAGE 2 OF 2

Locator Tool Report

General Information:

Application ID:27 Date: 05-28-2015 Time: 11:49:41

WR File Number: C-03781-POD1
Purpose: POINT OF DIVERSION

Applicant First Name: BOPCO EXPLORATORY WELL DRILLERS RECORD
Applicant Last Name: RENUMBERED C-3832-POD1

GW Basin: CARLSBAD
County: EDDY

Critical Management Area Name(s): NONE
Special Condition Area Name(s): NONE
Land Grant Name: NON GRANT

PLSS Description (New Mexico Principal Meridian):

SE 1/4 of SW 1/4 of SW 1/4 of SW 1/4 of Section 13, Township 25S, Range 30E.

Coordinate System Details:

Geographic Coordinates:

Latitude:	32 Degrees	7 Minutes	26.2 Seconds	N
Longitude:	103 Degrees	50 Minutes	28.5 Seconds	W

Universal Transverse Mercator Zone: 13N

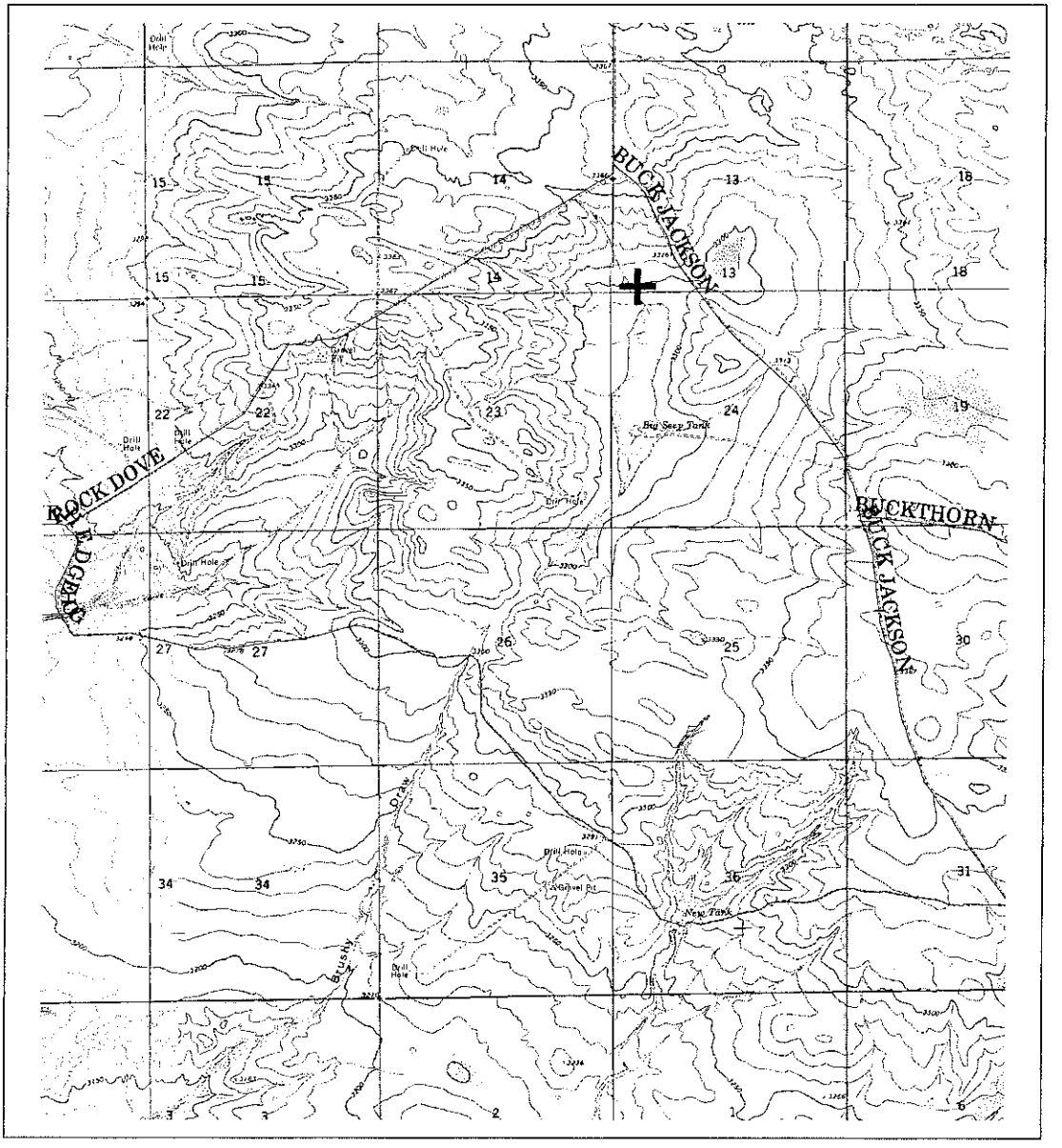
NAD 1983(92) (Meters)	N: 3,554,762	E: 609,306
NAD 1983(92) (Survey Feet)	N: 11,662,581	E: 1,999,031
NAD 1927 (Meters)	N: 3,554,561	E: 609,354
NAD 1927 (Survey Feet)	N: 11,661,921	E: 1,999,188

State Plane Coordinate System Zone: New Mexico East

NAD 1983(92) (Meters)	N: 124,717	E: 211,432
NAD 1983(92) (Survey Feet)	N: 409,175	E: 693,673
NAD 1927 (Meters)	N: 124,699	E: 198,879
NAD 1927 (Survey Feet)	N: 409,117	E: 652,487

NEW MEXICO OFFICE OF STATE ENGINEER

Locator Tool Report



WR File Number: C-03781-POD1 Scale: 1:49,965

Northing/Easting: UTM83(92) (Meter): N: 3,554,762 E: 609,306

Northing/Easting: SPCS83(92) (Feet): N: 409,175 E: 693,673

GW Basin: Carlsbad

Print Date: 05/28/2015

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

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

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

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

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

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

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

NW SW NE Sec. 25 T25S R30E

2. DRILLING & CASING INFORMATION

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

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

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

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

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

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

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

4. HYDROGEOLOGIC ~~LOG~~ OF WELL

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

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

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

OSE DII MAR 11 2021 PM4:28

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

Shane Eldridge

6. SIGNATURE

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

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

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

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

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

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

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

Mar. 11, 2021

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

Greetings:

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

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

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

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

Sincerely,

Andrew Dennis
(575)622-6521

drywell

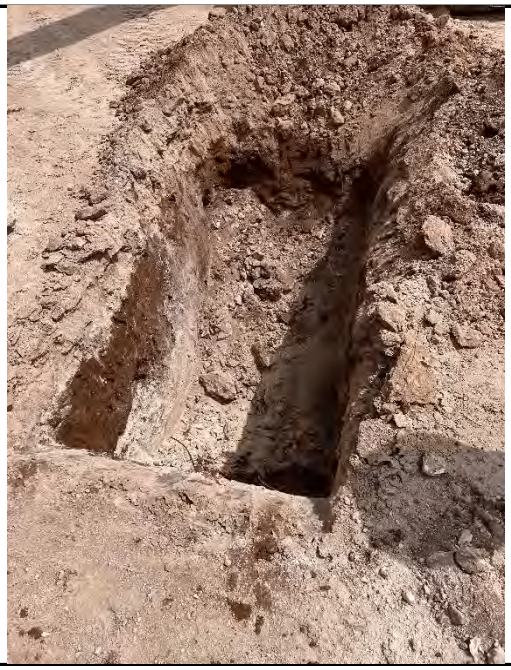
ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
PLU PC 17 SWD 1
NAPP2216839215



Photograph 1 Date: 08/24/22
Description: Pothole activities.

Photograph 2 Date: 08/24/22
Description: Excavation activities.

Photograph 3 Date: 08/24/22
Description: Excavation activities.

Photograph 4 Date: 08/24/22
Description: Excavation activities.

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name: PH01	Date: 08/24/22
	Site Name: PLU PC 17 SWD 1	
	Incident Number: nAPP2216839215	
	Job Number: 03E1558087	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS/CW	Method: Trackhoe
Coordinates: 32.125946,-103.904268	Hole Diameter: N/A	Total Depth: 3'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	>9,000	5.4	N	SS01	0.2		CCHE (fill)	0-1', CALICHE, moist, tan-light brown, some small sub-round gravel, no stain, no odor, fill
D	5,062	0.8	N			1	SP-SM	1'-3', SILTY SAND, dry, reddish brown, fine grained, poorly graded, no stain, no odor.
D	2,268	0.3	N	PH01	2	2		
D	324.8	0.2	N	PH01	3	3		
							TD	Total Depth at 3 feet bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name: PH02	Date: 08/24/22
	Site Name: PLU PC 17 SWD 1	
	Incident Number: nAPP2216839215	
	Job Number: 03E1558087	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS/CW	Method: Trackhoe
Coordinates: 32.126102,-103.904224	Hole Diameter: N/A	Total Depth: 2

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	>9,000	2.3	N	SS02	0.2		CCHE (fill)	0-1', CALICHE, moist, tan-light brown, some small sub-round gravel, no stain, no odor, fill
D	3,252	0.6	N			1	SP-SM	1'-3', SILTY SAND, dry, reddish brown, fine grained, poorly graded, no stain, no odor.
D	5,062	0.3	N	PH02	2	2		
							TD	Total Depth at 2 feet bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name: PH03	Date: 08/24/22
	Site Name: PLU PC 17 SWD 1	
	Incident Number: nAPP2216839215	
	Job Number: 03E1558087	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CS/CW	Method: Trackhoe
Coordinates: 32.126024,-103.904228	Hole Diameter: N/A	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	>9,000	3.4	N	SS03	0.2		CCHE (fill)	0-1', CALICHE, moist, tan-light brown, some small sub-round gravel, no stain, no odor, fill
D	6,988	0.6	N			1	SP-SM	1'-3', SILTY SAND, dry, reddish brown, fine grained, poorly graded, no stain, no odor.
D	9,520	0.3	N	PH03	2	2		
							TD	Total Depth at 2 feet bgs.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2660-1
Laboratory Sample Delivery Group: Eddy County
Client Project/Site: PLU Pierce Canyon

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
8/4/2022 12:57:45 PM

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

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

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

Client: Ensolum
Project/Site: PLU Pierce Canyon

Laboratory Job ID: 890-2660-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

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 Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Job ID: 890-2660-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2660-1

Receipt
The samples were received on 7/27/2022 4:41 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
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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30990 and analytical batch 880-31051 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-2660-A-1-B MS). 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-31016 and analytical batch 880-31319 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 Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Client Sample ID: SS01

Lab Sample ID: 890-2660-1
Matrix: Solid
Date Collected: 07/26/22 15:05
Date Received: 07/27/22 16:41
Sample Depth: 0.2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/29/22 12:56	07/31/22 14:22	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/29/22 12:56	07/31/22 14:22	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/29/22 12:56	07/31/22 14:22	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/29/22 12:56	07/31/22 14:22	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/29/22 12:56	07/31/22 14:22	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/29/22 12:56	07/31/22 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*07/29/22 12:56*	*07/31/22 14:22*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*07/29/22 12:56*	*07/31/22 14:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			08/01/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/31/22 10:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/29/22 10:59	07/30/22 20:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	49.9		mg/Kg		07/29/22 10:59	07/30/22 20:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/29/22 10:59	07/30/22 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*07/29/22 10:59*	*07/30/22 20:57*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/29/22 10:59*	*07/30/22 20:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19000**	**F1**	249		mg/Kg			08/04/22 08:47	50

Client Sample ID: SS02

Lab Sample ID: 890-2660-2
Matrix: Solid
Date Collected: 07/26/22 15:15
Date Received: 07/27/22 16:41
Sample Depth: 0.2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/29/22 12:56	07/31/22 14:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/29/22 12:56	07/31/22 14:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/29/22 12:56	07/31/22 14:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/29/22 12:56	07/31/22 14:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/29/22 12:56	07/31/22 14:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/29/22 12:56	07/31/22 14:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*07/29/22 12:56*	*07/31/22 14:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Client Sample ID: SS02

Lab Sample ID: 890-2660-2
Matrix: Solid
Date Collected: 07/26/22 15:15
Date Received: 07/27/22 16:41
Sample Depth: 0.2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/29/22 12:56*	*07/31/22 14:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/01/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/31/22 10:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/29/22 10:59	07/30/22 22:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/29/22 10:59	07/30/22 22:02	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/29/22 10:59	07/30/22 22:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*97*		*70 - 130*	*07/29/22 10:59*	*07/30/22 22:02*	*1*
o-Terphenyl	*126*		*70 - 130*	*07/29/22 10:59*	*07/30/22 22:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13600**		99.4		mg/Kg			08/04/22 09:10	20

Client Sample ID: SS03

Lab Sample ID: 890-2660-3
Matrix: Solid
Date Collected: 07/26/22 15:25
Date Received: 07/27/22 16:41
Sample Depth: 0.2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/29/22 12:56	07/31/22 15:03	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/29/22 12:56	07/31/22 15:03	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/29/22 12:56	07/31/22 15:03	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/29/22 12:56	07/31/22 15:03	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/29/22 12:56	07/31/22 15:03	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/29/22 12:56	07/31/22 15:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*07/29/22 12:56*	*07/31/22 15:03*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/29/22 12:56*	*07/31/22 15:03*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			08/01/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**152**		50.0		mg/Kg			07/31/22 10:27	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Client Sample ID: SS03

Date Collected: 07/26/22 15:25
Date Received: 07/27/22 16:41
Sample Depth: 0.2

Lab Sample ID: 890-2660-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/29/22 10:59	07/30/22 22:23	1
Diesel Range Organics (Over C10-C28)	**94.4**		50.0		mg/Kg		07/29/22 10:59	07/30/22 22:23	1
Oil Range Organics (Over C28-C36)	**57.1**		50.0		mg/Kg		07/29/22 10:59	07/30/22 22:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*71*		*70 - 130*	*07/29/22 10:59*	*07/30/22 22:23*	*1*
o-Terphenyl	*87*		*70 - 130*	*07/29/22 10:59*	*07/30/22 22:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36900**		252		mg/Kg			08/04/22 09:18	50

Client Sample ID: SS04

Date Collected: 07/26/22 15:35
Date Received: 07/27/22 16:41
Sample Depth: 0.2

Lab Sample ID: 890-2660-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 15:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 15:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 15:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 15:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 15:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/29/22 12:56*	*07/31/22 15:24*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/29/22 12:56*	*07/31/22 15:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/01/22 10:24	1

Method: 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			07/31/22 10:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/29/22 10:59	07/30/22 22:45	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/29/22 10:59	07/30/22 22:45	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/29/22 10:59	07/30/22 22:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/29/22 10:59*	*07/30/22 22:45*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/29/22 10:59*	*07/30/22 22:45*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Client Sample ID: SS04
Date Collected: 07/26/22 15:35
Date Received: 07/27/22 16:41
Sample Depth: 0.2

Lab Sample ID: 890-2660-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17700		252		mg/Kg			08/04/22 09:26	50

Surrogate Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-2660-1	SS01	107	93
890-2660-2	SS02	109	92
890-2660-3	SS03	109	92
890-2660-4	SS04	108	90
890-2666-A-3-D MS	Matrix Spike	108	99
890-2666-A-3-E MSD	Matrix Spike Duplicate	99	93
890-2674-A-2-D MS	Matrix Spike	109	101
890-2674-A-2-E MSD	Matrix Spike Duplicate	105	98
LCS 880-31008/1-A	Lab Control Sample	100	98
LCS 880-31012/1-A	Lab Control Sample	105	101
LCSD 880-31008/2-A	Lab Control Sample Dup	103	98
LCSD 880-31012/2-A	Lab Control Sample Dup	111	97
MB 880-31008/5-A	Method Blank	100	87
MB 880-31012/5-A	Method Blank	100	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2660-1	SS01	83	109
890-2660-1 MS	SS01	56 S1-	64 S1-
890-2660-1 MSD	SS01	73	81
890-2660-2	SS02	97	126
890-2660-3	SS03	71	87
890-2660-4	SS04	89	108
LCS 880-30990/2-A	Lab Control Sample	86	86
LCSD 880-30990/3-A	Lab Control Sample Dup	84	84
MB 880-30990/1-A	Method Blank	108	128

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31008/5-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31008

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 12:56	07/31/22 12:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 12:56	07/31/22 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/29/22 12:56*	*07/31/22 12:18*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/29/22 12:56*	*07/31/22 12:18*	*1*

Lab Sample ID: LCS 880-31008/1-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31008

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08240		mg/Kg		82	70 - 130		
Toluene			0.100	0.07858		mg/Kg		79	70 - 130		
Ethylbenzene			0.100	0.08153		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1657		mg/Kg		83	70 - 130		
o-Xylene			0.100	0.09065		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-31008/2-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31008

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1013		mg/Kg		101	70 - 130	21	35
Toluene			0.100	0.09750		mg/Kg		98	70 - 130	21	35
Ethylbenzene			0.100	0.1006		mg/Kg		101	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.2029		mg/Kg		101	70 - 130	20	35
o-Xylene			0.100	0.1108		mg/Kg		111	70 - 130	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-2674-A-2-D MS
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31008

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.101	0.08255		mg/Kg		82	70 - 130		
Toluene	<0.00199	U	0.101	0.07891		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

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

Lab Sample ID: 890-2674-A-2-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.08077		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1639		mg/Kg		81	70 - 130
o-Xylene	<0.00199	U	0.101	0.08914		mg/Kg		88	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-2674-A-2-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.08499		mg/Kg		85	70 - 130	3	35
Toluene	<0.00199	U	0.0996	0.08281		mg/Kg		82	70 - 130	5	35
Ethylbenzene	<0.00199	U	0.0996	0.08457		mg/Kg		85	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1702		mg/Kg		85	70 - 130	4	35
o-Xylene	<0.00199	U	0.0996	0.09264		mg/Kg		93	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-31012/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31012**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:33	07/31/22 22:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 13:33	07/31/22 22:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/29/22 13:33*	*07/31/22 22:55*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/29/22 13:33*	*07/31/22 22:55*	*1*

Lab Sample ID: LCS 880-31012/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31093 — **Prep Batch: 31012**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09484		mg/Kg		95	70 - 130
Toluene	0.100	0.08991		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.09258		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	0.200	0.1866		mg/Kg		93	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

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

Lab Sample ID: LCS 880-31012/1-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31012

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09997		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-31012/2-A
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31012

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08621		mg/Kg		86	70 - 130	10	35
Toluene			0.100	0.08683		mg/Kg		87	70 - 130	3	35
Ethylbenzene			0.100	0.09088		mg/Kg		91	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1891		mg/Kg		95	70 - 130	1	35
o-Xylene			0.100	0.1128		mg/Kg		113	70 - 130	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-2666-A-3-D MS
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31012

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.101	0.1060		mg/Kg		105	70 - 130		
Toluene	0.00327		0.101	0.1008		mg/Kg		97	70 - 130		
Ethylbenzene	0.00620		0.101	0.1041		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene	0.0197		0.202	0.2112		mg/Kg		95	70 - 130		
o-Xylene	0.0128		0.101	0.1210		mg/Kg		107	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2666-A-3-E MSD
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31012

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.08957		mg/Kg		89	70 - 130	17	35
Toluene	0.00327		0.100	0.09161		mg/Kg		88	70 - 130	10	35
Ethylbenzene	0.00620		0.100	0.09040		mg/Kg		84	70 - 130	14	35
m-Xylene & p-Xylene	0.0197		0.200	0.1797		mg/Kg		80	70 - 130	16	35
o-Xylene	0.0128		0.100	0.1015		mg/Kg		88	70 - 130	18	35

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

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

Lab Sample ID: 890-2666-A-3-E MSD
Matrix: Solid
Analysis Batch: 31093

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31012

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-30990/1-A
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30990

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/29/22 10:59	07/30/22 19:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/29/22 10:59	07/30/22 19:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/29/22 10:59	07/30/22 19:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	07/29/22 10:59	07/30/22 19:52	1
o-Terphenyl	128		70 - 130	07/29/22 10:59	07/30/22 19:52	1

Lab Sample ID: LCS 880-30990/2-A
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30990

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1103		mg/Kg		110	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1110		mg/Kg		111	70 - 130		

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

Lab Sample ID: LCSD 880-30990/3-A
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30990

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1059		mg/Kg		106	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1089		mg/Kg		109	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	84		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

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

Lab Sample ID: 890-2660-1 MS
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30990

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	725.8		mg/Kg		71	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	556.4	F1	mg/Kg		52	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*56*	*S1-*	*70 - 130*
o-Terphenyl	*64*	*S1-*	*70 - 130*

Lab Sample ID: 890-2660-1 MSD
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 30990

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	811.6		mg/Kg		79	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1 F2	999	710.0	F1 F2	mg/Kg		67	70 - 130	24	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*73*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31016/1-A
Matrix: Solid
Analysis Batch: 31319

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			08/04/22 08:23	1

Lab Sample ID: LCS 880-31016/2-A
Matrix: Solid
Analysis Batch: 31319

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	247.1		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-31016/3-A
Matrix: Solid
Analysis Batch: 31319

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	247.0		mg/Kg		99	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2660-1 MS — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31319

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	19000	F1	12500	38060	F1	mg/Kg		153	90 - 110

Lab Sample ID: 890-2660-1 MSD — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31319

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	19000	F1	12500	38010	F1	mg/Kg		153	90 - 110	0	20

Lab Sample ID: 890-2667-A-2-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31319

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.9		251	266.4		mg/Kg		101	90 - 110

Lab Sample ID: 890-2667-A-2-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31319

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	12.9		251	265.9		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

GC VOA

Prep Batch: 31008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Total/NA	Solid	5035	
890-2660-2	SS02	Total/NA	Solid	5035	
890-2660-3	SS03	Total/NA	Solid	5035	
890-2660-4	SS04	Total/NA	Solid	5035	
MB 880-31008/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31008/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31008/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2674-A-2-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2674-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 31012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31012/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31012/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31012/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2666-A-3-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2666-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Total/NA	Solid	8021B	31008
890-2660-2	SS02	Total/NA	Solid	8021B	31008
890-2660-3	SS03	Total/NA	Solid	8021B	31008
890-2660-4	SS04	Total/NA	Solid	8021B	31008
MB 880-31008/5-A	Method Blank	Total/NA	Solid	8021B	31008
MB 880-31012/5-A	Method Blank	Total/NA	Solid	8021B	31012
LCS 880-31008/1-A	Lab Control Sample	Total/NA	Solid	8021B	31008
LCS 880-31012/1-A	Lab Control Sample	Total/NA	Solid	8021B	31012
LCSD 880-31008/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31008
LCSD 880-31012/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31012
890-2666-A-3-D MS	Matrix Spike	Total/NA	Solid	8021B	31012
890-2666-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31012
890-2674-A-2-D MS	Matrix Spike	Total/NA	Solid	8021B	31008
890-2674-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31008

Analysis Batch: 31171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Total/NA	Solid	Total BTEX	
890-2660-2	SS02	Total/NA	Solid	Total BTEX	
890-2660-3	SS03	Total/NA	Solid	Total BTEX	
890-2660-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Total/NA	Solid	8015NM Prep	
890-2660-2	SS02	Total/NA	Solid	8015NM Prep	
890-2660-3	SS03	Total/NA	Solid	8015NM Prep	
890-2660-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-30990/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

GC Semi VOA (Continued)

Prep Batch: 30990 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-30990/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30990/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2660-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-2660-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Total/NA	Solid	8015B NM	30990
890-2660-2	SS02	Total/NA	Solid	8015B NM	30990
890-2660-3	SS03	Total/NA	Solid	8015B NM	30990
890-2660-4	SS04	Total/NA	Solid	8015B NM	30990
MB 880-30990/1-A	Method Blank	Total/NA	Solid	8015B NM	30990
LCS 880-30990/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30990
LCSD 880-30990/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30990
890-2660-1 MS	SS01	Total/NA	Solid	8015B NM	30990
890-2660-1 MSD	SS01	Total/NA	Solid	8015B NM	30990

Analysis Batch: 31108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Total/NA	Solid	8015 NM	
890-2660-2	SS02	Total/NA	Solid	8015 NM	
890-2660-3	SS03	Total/NA	Solid	8015 NM	
890-2660-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Soluble	Solid	DI Leach	
890-2660-2	SS02	Soluble	Solid	DI Leach	
890-2660-3	SS03	Soluble	Solid	DI Leach	
890-2660-4	SS04	Soluble	Solid	DI Leach	
MB 880-31016/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31016/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31016/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2660-1 MS	SS01	Soluble	Solid	DI Leach	
890-2660-1 MSD	SS01	Soluble	Solid	DI Leach	
890-2667-A-2-G MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2667-A-2-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2660-1	SS01	Soluble	Solid	300.0	31016
890-2660-2	SS02	Soluble	Solid	300.0	31016
890-2660-3	SS03	Soluble	Solid	300.0	31016
890-2660-4	SS04	Soluble	Solid	300.0	31016
MB 880-31016/1-A	Method Blank	Soluble	Solid	300.0	31016
LCS 880-31016/2-A	Lab Control Sample	Soluble	Solid	300.0	31016
LCSD 880-31016/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31016
890-2660-1 MS	SS01	Soluble	Solid	300.0	31016
890-2660-1 MSD	SS01	Soluble	Solid	300.0	31016

QC Association Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

HPLC/IC (Continued)

Analysis Batch: 31319 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2667-A-2-G MS	Matrix Spike	Soluble	Solid	300.0	31016
890-2667-A-2-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31016

Lab Chronicle

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Client Sample ID: SS01
Date Collected: 07/26/22 15:05
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2660-1
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			4.96 g	5 mL	31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31093	07/31/22 14:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31171	08/01/22 10:24	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31108	07/31/22 10:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30990	07/29/22 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31051	07/30/22 20:57	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	31016	07/29/22 14:03	SMC	XEN MID
Soluble	Analysis	300.0		50			31319	08/04/22 08:47	CH	XEN MID

Client Sample ID: SS02
Date Collected: 07/26/22 15:15
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2660-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31093	07/31/22 14:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31171	08/01/22 10:24	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31108	07/31/22 10:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30990	07/29/22 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31051	07/30/22 22:02	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	31016	07/29/22 14:03	SMC	XEN MID
Soluble	Analysis	300.0		20			31319	08/04/22 09:10	CH	XEN MID

Client Sample ID: SS03
Date Collected: 07/26/22 15:25
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2660-3
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			5.04 g	5 mL	31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31093	07/31/22 15:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31171	08/01/22 10:24	SM	XEN MID
Total/NA	Analysis	8015 NM		1			31108	07/31/22 10:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30990	07/29/22 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31051	07/30/22 22:23	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	31016	07/29/22 14:03	SMC	XEN MID
Soluble	Analysis	300.0		50			31319	08/04/22 09:18	CH	XEN MID

Client Sample ID: SS04
Date Collected: 07/26/22 15:35
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2660-4
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			5.00 g	5 mL	31008	07/29/22 12:56	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31093	07/31/22 15:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31171	08/01/22 10:24	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Client Sample ID: SS04

Date Collected: 07/26/22 15:35
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2660-4

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			31108	07/31/22 10:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30990	07/29/22 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			31051	07/30/22 22:45	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	31016	07/29/22 14:03	SMC	XEN MID
Soluble	Analysis	300.0		50			31319	08/04/22 09:26	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

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

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

Sample Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon

Job ID: 890-2660-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2660-1	SS01	Solid	07/26/22 15:05	07/27/22 16:41	0.2
890-2660-2	SS02	Solid	07/26/22 15:15	07/27/22 16:41	0.2
890-2660-3	SS03	Solid	07/26/22 15:25	07/27/22 16:41	0.2
890-2660-4	SS04	Solid	07/26/22 15:35	07/27/22 16:41	0.2

Chain of Custody

eurofins | Environment Testing Xenco

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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks	Address:	3104 E Greene St
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	337-257-8032	Email:	garrett.green@exxonmobile.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 Pierce Canyon	Turn Around	☐ Routine ☐ Rush
Project Number:	03E1558087	Due Date:	
Project Location:	Eddy County	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	CB		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-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

ANALYSIS REQUEST

Pres. Code

Parameters: CHL, BTEX, TPH

890-2660 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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Sample Comments
SS01	S	7-26	1505	.2	G	1	Inc ID NAPP2216839215
SS02	S		1515	.2	G	1	
SS03	S		1520	.2	G	1	
SS04	S	↓	1535	.2	G	1	CC 1090741001

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.27.22 16	41		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2660-1
SDG Number: Eddy County

Login Number: 2660
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2660-1
SDG Number: Eddy County

Login Number: 2660
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/29/22 10:24 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 America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2843-1
Laboratory Sample Delivery Group: 03E1558087
Client Project/Site: PLU Pierce Canyon 17 SWD 1

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

Attn: Ben Belill

JKramer

Authorized for release by:
8/30/2022 11:53:26 AM

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

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

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

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Laboratory Job ID: 890-2843-1
SDG: 03E1558087

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2843-1
Project/Site: PLU Pierce Canyon 17 SWD 1 SDG: 03E1558087

Qualifiers

GC VOA

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

GC Semi VOA

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

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 Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

Job ID: 890-2843-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2843-1

Receipt
The sample was received on 8/25/2022 8:39 AM. 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 4.0°C

GC VOA
Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-33069 and analytical batch 880-33162 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: (880-18562-A-1-B MS) and (880-18562-A-1-C MSD). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-33060 and analytical batch 880-33106 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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 Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

Client Sample ID: PH01

Date Collected: 08/24/22 10:05
Date Received: 08/25/22 08:39
Sample Depth: 3

Lab Sample ID: 890-2843-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 17:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 17:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 17:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/27/22 14:13	08/29/22 17:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 17:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/27/22 14:13	08/29/22 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*08/27/22 14:13*	*08/29/22 17:31*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*08/27/22 14:13*	*08/29/22 17:31*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/29/22 10:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/26/22 13:02	08/28/22 04:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/26/22 13:02	08/28/22 04:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/22 13:02	08/28/22 04:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*08/26/22 13:02*	*08/28/22 04:15*	*1*
o-Terphenyl	*82*		*70 - 130*	*08/26/22 13:02*	*08/28/22 04:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**247**		4.97		mg/Kg			08/30/22 00:18	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

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)
890-2842-A-1-E MS	Matrix Spike	97	104
890-2842-A-1-F MSD	Matrix Spike Duplicate	91	100
890-2843-1	PH01	87	109
LCS 880-33069/1-A	Lab Control Sample	95	101
LCSD 880-33069/2-A	Lab Control Sample Dup	92	105
MB 880-33069/5-A	Method Blank	78	120

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-18562-A-1-B MS	Matrix Spike	66 S1-	59 S1-
880-18562-A-1-C MSD	Matrix Spike Duplicate	64 S1-	58 S1-
890-2843-1	PH01	82	82
LCS 880-33060/2-A	Lab Control Sample	88	94
LCSD 880-33060/3-A	Lab Control Sample Dup	91	98
MB 880-33060/1-A	Method Blank	74	78

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33069/5-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33069

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/27/22 14:13	08/29/22 16:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*08/27/22 14:13*	*08/29/22 16:12*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*08/27/22 14:13*	*08/29/22 16:12*	*1*

Lab Sample ID: LCS 880-33069/1-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33069

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09832		mg/Kg		98	70 - 130		
Toluene			0.100	0.1039		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1038		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.1932		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.1029		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-33069/2-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33069

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1050		mg/Kg		105	70 - 130	7	35
Toluene			0.100	0.1026		mg/Kg		103	70 - 130	1	35
Ethylbenzene			0.100	0.1002		mg/Kg		100	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1844		mg/Kg		92	70 - 130	5	35
o-Xylene			0.100	0.09694		mg/Kg		97	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-2842-A-1-E MS
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33069

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.07083		mg/Kg		71	70 - 130		
Toluene	<0.00199	U	0.0998	0.07660		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

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

Lab Sample ID: 890-2842-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33162 — **Prep Batch: 33069**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.07257		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1321	F1	mg/Kg		66	70 - 130
o-Xylene	<0.00199	U	0.0998	0.07263		mg/Kg		73	70 - 130

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

Lab Sample ID: 890-2842-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33162 — **Prep Batch: 33069**

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	0.08963		mg/Kg		89	70 - 130	23	35
Toluene	<0.00199	U	0.100	0.09049		mg/Kg		90	70 - 130	17	35
Ethylbenzene	<0.00199	U	0.100	0.08761		mg/Kg		87	70 - 130	19	35
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.1610		mg/Kg		80	70 - 130	20	35
o-Xylene	<0.00199	U	0.100	0.08501		mg/Kg		85	70 - 130	16	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-33060/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33106 — **Prep Batch: 33060**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/26/22 13:02	08/27/22 20:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/22 13:02	08/27/22 20:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/22 13:02	08/27/22 20:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*08/26/22 13:02*	*08/27/22 20:36*	*1*
o-Terphenyl	*78*		*70 - 130*	*08/26/22 13:02*	*08/27/22 20:36*	*1*

Lab Sample ID: LCS 880-33060/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33106 — **Prep Batch: 33060**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	897.9		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	788.7		mg/Kg		79	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

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

Lab Sample ID: LCS 880-33060/2-A
Matrix: Solid
Analysis Batch: 33106

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33060

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: LCSD 880-33060/3-A
Matrix: Solid
Analysis Batch: 33106

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33060

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	922.5		mg/Kg		92	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	853.5		mg/Kg		85	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 880-18562-A-1-B MS
Matrix: Solid
Analysis Batch: 33106

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33060

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	882.9		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	609.4	F1	mg/Kg		61	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	66	S1-	70 - 130
o-Terphenyl	59	S1-	70 - 130

Lab Sample ID: 880-18562-A-1-C MSD
Matrix: Solid
Analysis Batch: 33106

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33060

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	899.3		mg/Kg		88	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	998	594.2	F1	mg/Kg		60	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	64	S1-	70 - 130
o-Terphenyl	58	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33059/1-A
Matrix: Solid
Analysis Batch: 33244

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			08/29/22 22:09	1

Lab Sample ID: LCS 880-33059/2-A
Matrix: Solid
Analysis Batch: 33244

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.5		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33059/3-A
Matrix: Solid
Analysis Batch: 33244

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	258.6		mg/Kg		103	90 - 110	2	20

Lab Sample ID: 880-18518-A-1-B MS
Matrix: Solid
Analysis Batch: 33244

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	26.4		251	292.1		mg/Kg		106	90 - 110		

Lab Sample ID: 880-18518-A-1-C MSD
Matrix: Solid
Analysis Batch: 33244

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	26.4		252	292.9		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

GC VOA

Prep Batch: 33069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Total/NA	Solid	5035	
MB 880-33069/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33069/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33069/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2842-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2842-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Total/NA	Solid	8021B	33069
MB 880-33069/5-A	Method Blank	Total/NA	Solid	8021B	33069
LCS 880-33069/1-A	Lab Control Sample	Total/NA	Solid	8021B	33069
LCSD 880-33069/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33069
890-2842-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	33069
890-2842-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33069

Analysis Batch: 33328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 33060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Total/NA	Solid	8015NM Prep	
MB 880-33060/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33060/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33060/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-18562-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-18562-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Total/NA	Solid	8015B NM	33060
MB 880-33060/1-A	Method Blank	Total/NA	Solid	8015B NM	33060
LCS 880-33060/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33060
LCSD 880-33060/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33060
880-18562-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	33060
880-18562-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33060

Analysis Batch: 33179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Soluble	Solid	DI Leach	
MB 880-33059/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33059/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

HPLC/IC (Continued)

Leach Batch: 33059 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-18518-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-18518-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2843-1	PH01	Soluble	Solid	300.0	33059
MB 880-33059/1-A	Method Blank	Soluble	Solid	300.0	33059
LCS 880-33059/2-A	Lab Control Sample	Soluble	Solid	300.0	33059
LCSD 880-33059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33059
880-18518-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	33059
880-18518-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33059

Lab Chronicle

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

Client Sample ID: PH01
Date Collected: 08/24/22 10:05
Date Received: 08/25/22 08:39

Lab Sample ID: 890-2843-1
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	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/29/22 17:31	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33328	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33179	08/29/22 10:11	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	33060	08/26/22 13:02	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33106	08/28/22 04:15	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33244	08/30/22 00:18	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 Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

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 Pierce Canyon 17 SWD 1

Job ID: 890-2843-1
SDG: 03E1558087

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2843-1	PH01	Solid	08/24/22 10:05	08/25/22 08:39	3

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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU Pierce Canyon 17 SWD 1	Turn Around	
Project Number:	03E1558087	☐ Routine ☑ Rush	
Project Location:		Due Date: 2 Day	
Sampler's Name:	Conner Shore	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:	NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.2	
Total Containers:		Corrected Temperature:	4.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
PH01	S	08.24.22	1005	3'	G	1		x	x	x

890-2843 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:
nAPP2216539215
Cost Center:
1090741001
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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8.25.22 839	4		
3			6		
5					

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2843-1
SDG Number: 03E1558087

Login Number: 2843
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2843-1
SDG Number: 03E1558087

Login Number: 2843
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 08/26/22 11:03 AM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2846-1
Laboratory Sample Delivery Group: 03E1558087
Client Project/Site: PLU Pierce Canyon 17 SWD 1

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

Attn: Ben Belill

JKramer

Authorized for release by:
8/30/2022 11:54:22 AM

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

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

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

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Laboratory Job ID: 890-2846-1
SDG: 03E1558087

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2846-1
Project/Site: PLU Pierce Canyon 17 SWD 1 SDG: 03E1558087

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Job ID: 890-2846-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2846-1

Receipt
The samples were received on 8/25/2022 8:39 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-33069 and analytical batch 880-33162 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
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 880-33059 and analytical batch 880-33244 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 Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Client Sample ID: SS05

Date Collected: 08/24/22 13:10
Date Received: 08/25/22 08:39
Sample Depth: 0.5

Lab Sample ID: 890-2846-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 22:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 22:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 22:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/29/22 22:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 22:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/29/22 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*08/27/22 14:13*	*08/29/22 22:05*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*08/27/22 14:13*	*08/29/22 22:05*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			08/29/22 10:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 22:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 22:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*08/26/22 13:06*	*08/26/22 22:36*	*1*
o-Terphenyl	*105*		*70 - 130*	*08/26/22 13:06*	*08/26/22 22:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**522**	**F1**	24.8		mg/Kg			08/30/22 00:46	5

Client Sample ID: SS06

Date Collected: 08/24/22 13:20
Date Received: 08/25/22 08:39
Sample Depth: 0.5

Lab Sample ID: 890-2846-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 22:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 22:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 22:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/27/22 14:13	08/29/22 22:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 22:25	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/27/22 14:13	08/29/22 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*08/27/22 14:13*	*08/29/22 22:25*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Client Sample ID: SS06

Lab Sample ID: 890-2846-2
Matrix: Solid
Date Collected: 08/24/22 13:20
Date Received: 08/25/22 08:39
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*08/27/22 14:13*	*08/29/22 22:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/29/22 10:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 22:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 22:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*08/26/22 13:06*	*08/26/22 22:56*	*1*
o-Terphenyl	*97*		*70 - 130*	*08/26/22 13:06*	*08/26/22 22:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**282**		5.04	mg/Kg			08/30/22 01:13	1

Client Sample ID: SS07

Lab Sample ID: 890-2846-3
Matrix: Solid
Date Collected: 08/24/22 13:25
Date Received: 08/25/22 08:39
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/27/22 14:13	08/29/22 22:45	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/27/22 14:13	08/29/22 22:45	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/27/22 14:13	08/29/22 22:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/27/22 14:13	08/29/22 22:45	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/27/22 14:13	08/29/22 22:45	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/27/22 14:13	08/29/22 22:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*08/27/22 14:13*	*08/29/22 22:45*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*08/27/22 14:13*	*08/29/22 22:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/29/22 10:06	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Client Sample ID: SS07

Lab Sample ID: 890-2846-3
Matrix: Solid
Date Collected: 08/24/22 13:25
Date Received: 08/25/22 08:39
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 23:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 23:17	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*08/26/22 13:06*	*08/26/22 23:17*	*1*
o-Terphenyl	*100*		*70 - 130*	*08/26/22 13:06*	*08/26/22 23:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**387**		5.05		mg/Kg			08/30/22 01:23	1

Client Sample ID: SS08

Lab Sample ID: 890-2846-4
Matrix: Solid
Date Collected: 08/24/22 13:30
Date Received: 08/25/22 08:39
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 23:06	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 23:06	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 23:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/27/22 14:13	08/29/22 23:06	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/27/22 14:13	08/29/22 23:06	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/27/22 14:13	08/29/22 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*08/27/22 14:13*	*08/29/22 23:06*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*08/27/22 14:13*	*08/29/22 23:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/29/22 10:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/26/22 13:06	08/26/22 23:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/26/22 13:06	08/26/22 23:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/22 13:06	08/26/22 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*08/26/22 13:06*	*08/26/22 23:37*	*1*
o-Terphenyl	*83*		*70 - 130*	*08/26/22 13:06*	*08/26/22 23:37*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Client Sample ID: SS08
Date Collected: 08/24/22 13:30
Date Received: 08/25/22 08:39
Sample Depth: 0.5

Lab Sample ID: 890-2846-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	467		5.05		mg/Kg			08/30/22 01:50	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

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)
890-2842-A-1-E MS	Matrix Spike	97	104
890-2842-A-1-F MSD	Matrix Spike Duplicate	91	100
890-2846-1	SS05	91	112
890-2846-2	SS06	97	110
890-2846-3	SS07	95	107
890-2846-4	SS08	97	104
LCS 880-33069/1-A	Lab Control Sample	95	101
LCSD 880-33069/2-A	Lab Control Sample Dup	92	105
MB 880-33069/5-A	Method Blank	78	120

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)
890-2842-A-1-C MS	Matrix Spike	81	78
890-2842-A-1-D MSD	Matrix Spike Duplicate	88	82
890-2846-1	SS05	94	105
890-2846-2	SS06	90	97
890-2846-3	SS07	91	100
890-2846-4	SS08	77	83
LCS 880-33061/2-A	Lab Control Sample	93	106
LCSD 880-33061/3-A	Lab Control Sample Dup	92	103
MB 880-33061/1-A	Method Blank	80	94

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33069/5-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33069

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/27/22 14:13	08/29/22 16:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*08/27/22 14:13*	*08/29/22 16:12*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*08/27/22 14:13*	*08/29/22 16:12*	*1*

Lab Sample ID: LCS 880-33069/1-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33069

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09832		mg/Kg		98	70 - 130		
Toluene			0.100	0.1039		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1038		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.1932		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.1029		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-33069/2-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33069

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1050		mg/Kg		105	70 - 130	7	35
Toluene			0.100	0.1026		mg/Kg		103	70 - 130	1	35
Ethylbenzene			0.100	0.1002		mg/Kg		100	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1844		mg/Kg		92	70 - 130	5	35
o-Xylene			0.100	0.09694		mg/Kg		97	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-2842-A-1-E MS
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33069

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.07083		mg/Kg		71	70 - 130		
Toluene	<0.00199	U	0.0998	0.07660		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

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

Lab Sample ID: 890-2842-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33162 — **Prep Batch: 33069**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.07257		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1321	F1	mg/Kg		66	70 - 130
o-Xylene	<0.00199	U	0.0998	0.07263		mg/Kg		73	70 - 130

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

Lab Sample ID: 890-2842-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33162 — **Prep Batch: 33069**

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	0.08963		mg/Kg		89	70 - 130	23	35
Toluene	<0.00199	U	0.100	0.09049		mg/Kg		90	70 - 130	17	35
Ethylbenzene	<0.00199	U	0.100	0.08761		mg/Kg		87	70 - 130	19	35
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.1610		mg/Kg		80	70 - 130	20	35
o-Xylene	<0.00199	U	0.100	0.08501		mg/Kg		85	70 - 130	16	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-33061/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33016 — **Prep Batch: 33061**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 20:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 20:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 20:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*08/26/22 13:06*	*08/26/22 20:32*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/26/22 13:06*	*08/26/22 20:32*	*1*

Lab Sample ID: LCS 880-33061/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33016 — **Prep Batch: 33061**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	896.9		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	884.2		mg/Kg		88	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

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

Lab Sample ID: LCS 880-33061/2-A
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33061

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	106		70 - 130

Lab Sample ID: LCSD 880-33061/3-A
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33061

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	921.3		mg/Kg		92	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	899.8		mg/Kg		90	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-2842-A-1-C MS
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33061

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	811.4		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	733.7		mg/Kg		73	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 890-2842-A-1-D MSD
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33061

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	875.8		mg/Kg		88	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	805.7		mg/Kg		81	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	82		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33059/1-A
Matrix: Solid
Analysis Batch: 33244

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			08/29/22 22:09	1

Lab Sample ID: LCS 880-33059/2-A
Matrix: Solid
Analysis Batch: 33244

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.5		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33059/3-A
Matrix: Solid
Analysis Batch: 33244

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	258.6		mg/Kg		103	90 - 110	2	20

Lab Sample ID: 890-2846-1 MS
Matrix: Solid
Analysis Batch: 33244

Client Sample ID: SS05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	522	F1	1240	1902	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 890-2846-1 MSD
Matrix: Solid
Analysis Batch: 33244

Client Sample ID: SS05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	522	F1	1240	1902	F1	mg/Kg		111	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

GC VOA

Prep Batch: 33069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Total/NA	Solid	5035	
890-2846-2	SS06	Total/NA	Solid	5035	
890-2846-3	SS07	Total/NA	Solid	5035	
890-2846-4	SS08	Total/NA	Solid	5035	
MB 880-33069/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33069/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33069/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2842-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2842-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Total/NA	Solid	8021B	33069
890-2846-2	SS06	Total/NA	Solid	8021B	33069
890-2846-3	SS07	Total/NA	Solid	8021B	33069
890-2846-4	SS08	Total/NA	Solid	8021B	33069
MB 880-33069/5-A	Method Blank	Total/NA	Solid	8021B	33069
LCS 880-33069/1-A	Lab Control Sample	Total/NA	Solid	8021B	33069
LCSD 880-33069/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33069
890-2842-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	33069
890-2842-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33069

Analysis Batch: 33332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Total/NA	Solid	Total BTEX	
890-2846-2	SS06	Total/NA	Solid	Total BTEX	
890-2846-3	SS07	Total/NA	Solid	Total BTEX	
890-2846-4	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 33016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Total/NA	Solid	8015B NM	33061
890-2846-2	SS06	Total/NA	Solid	8015B NM	33061
890-2846-3	SS07	Total/NA	Solid	8015B NM	33061
890-2846-4	SS08	Total/NA	Solid	8015B NM	33061
MB 880-33061/1-A	Method Blank	Total/NA	Solid	8015B NM	33061
LCS 880-33061/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33061
LCSD 880-33061/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33061
890-2842-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33061
890-2842-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33061

Prep Batch: 33061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Total/NA	Solid	8015NM Prep	
890-2846-2	SS06	Total/NA	Solid	8015NM Prep	
890-2846-3	SS07	Total/NA	Solid	8015NM Prep	
890-2846-4	SS08	Total/NA	Solid	8015NM Prep	
MB 880-33061/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33061/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

GC Semi VOA (Continued)

Prep Batch: 33061 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-33061/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2842-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2842-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Total/NA	Solid	8015 NM	
890-2846-2	SS06	Total/NA	Solid	8015 NM	
890-2846-3	SS07	Total/NA	Solid	8015 NM	
890-2846-4	SS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Soluble	Solid	DI Leach	
890-2846-2	SS06	Soluble	Solid	DI Leach	
890-2846-3	SS07	Soluble	Solid	DI Leach	
890-2846-4	SS08	Soluble	Solid	DI Leach	
MB 880-33059/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33059/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2846-1 MS	SS05	Soluble	Solid	DI Leach	
890-2846-1 MSD	SS05	Soluble	Solid	DI Leach	

Analysis Batch: 33244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2846-1	SS05	Soluble	Solid	300.0	33059
890-2846-2	SS06	Soluble	Solid	300.0	33059
890-2846-3	SS07	Soluble	Solid	300.0	33059
890-2846-4	SS08	Soluble	Solid	300.0	33059
MB 880-33059/1-A	Method Blank	Soluble	Solid	300.0	33059
LCS 880-33059/2-A	Lab Control Sample	Soluble	Solid	300.0	33059
LCSD 880-33059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33059
890-2846-1 MS	SS05	Soluble	Solid	300.0	33059
890-2846-1 MSD	SS05	Soluble	Solid	300.0	33059

Lab Chronicle

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Client Sample ID: SS05

Date Collected: 08/24/22 13:10
Date Received: 08/25/22 08:39

Lab Sample ID: 890-2846-1

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	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/29/22 22:05	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33332	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33174	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/26/22 22:36	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33244	08/30/22 00:46	CH	EET MID

Client Sample ID: SS06

Date Collected: 08/24/22 13:20
Date Received: 08/25/22 08:39

Lab Sample ID: 890-2846-2

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	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/29/22 22:25	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33332	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33174	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/26/22 22:56	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33244	08/30/22 01:13	CH	EET MID

Client Sample ID: SS07

Date Collected: 08/24/22 13:25
Date Received: 08/25/22 08:39

Lab Sample ID: 890-2846-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/29/22 22:45	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33332	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33174	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/26/22 23:17	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33244	08/30/22 01:23	CH	EET MID

Client Sample ID: SS08

Date Collected: 08/24/22 13:30
Date Received: 08/25/22 08:39

Lab Sample ID: 890-2846-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/29/22 23:06	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33332	08/30/22 10:24	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Client Sample ID: SS08

Date Collected: 08/24/22 13:30
Date Received: 08/25/22 08:39

Lab Sample ID: 890-2846-4

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			33174	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/26/22 23:37	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	33244	08/30/22 01:50	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 Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

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 Pierce Canyon 17 SWD 1

Job ID: 890-2846-1
SDG: 03E1558087

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2846-1	SS05	Solid	08/24/22 13:10	08/25/22 08:39	0.5
890-2846-2	SS06	Solid	08/24/22 13:20	08/25/22 08:39	0.5
890-2846-3	SS07	Solid	08/24/22 13:25	08/25/22 08:39	0.5
890-2846-4	SS08	Solid	08/24/22 13:30	08/25/22 08:39	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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU Pierce Canyon 17 SWD 1	Turn Around	☐ Routine ☑ Rush
Project Number:	03E1558087	Due Date:	2 Day
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Conner Shore		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	NM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.2
Total Containers:		Corrected Temperature:	4.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS05	S	08.24.22	1310	0.5'	G	1	x	x	x
SS06	S	08.24.22	1320	0.5'	G	2	x	x	x
SS07	S	08.24.22	1325	0.5'	G	3	x	x	x
SS08	S	08.24.22	1330	0.5'	G	4	x	x	x

890-2846 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: nAPP2216839215
Cost Center: 1090741001
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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8.25.22 8:39	4		
3			6		
5					

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2846-1
SDG Number: 03E1558087

Login Number: 2846
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2846-1
SDG Number: 03E1558087

Login Number: 2846
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 08/26/22 11:03 AM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2847-1
Laboratory Sample Delivery Group: 03E1558087
Client Project/Site: PLU PIERCE CANYON 17 SWD 1

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

Attn: Ben Belill

JKramer

Authorized for release by:
8/30/2022 11:54:50 AM

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

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

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

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Laboratory Job ID: 890-2847-1
SDG: 03E1558087

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2847-1
Project/Site: PLU PIERCE CANYON 17 SWD 1 SDG: 03E1558087

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Job ID: 890-2847-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2847-1

Receipt
The samples were received on 8/25/2022 8:39 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-33069 and analytical batch 880-33162 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH02 (890-2847-2). 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.

GC Semi VOA
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 880-33059 and analytical batch 880-33244 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 PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Client Sample ID: PH01

Date Collected: 08/24/22 10:00
Date Received: 08/25/22 08:39
Sample Depth: 2

Lab Sample ID: 890-2847-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/29/22 23:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/29/22 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/27/22 14:13*	*08/29/22 23:26*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/27/22 14:13*	*08/29/22 23:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			08/29/22 10:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 23:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 23:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/26/22 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*08/26/22 13:06*	*08/26/22 23:58*	*1*
o-Terphenyl	*82*		*70 - 130*	*08/26/22 13:06*	*08/26/22 23:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1640**		25.1		mg/Kg			08/30/22 02:00	5

Client Sample ID: PH02

Date Collected: 08/24/22 10:50
Date Received: 08/25/22 08:39
Sample Depth: 2

Lab Sample ID: 890-2847-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/29/22 23:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/29/22 23:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/29/22 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*08/27/22 14:13*	*08/29/22 23:47*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Client Sample ID: PH02

Lab Sample ID: 890-2847-2
Matrix: Solid
Date Collected: 08/24/22 10:50
Date Received: 08/25/22 08:39
Sample Depth: 2

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*08/27/22 14:13*	*08/29/22 23:47*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/29/22 10:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/27/22 00:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/27/22 00:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/27/22 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*08/26/22 13:06*	*08/27/22 00:18*	*1*
o-Terphenyl	*84*		*70 - 130*	*08/26/22 13:06*	*08/27/22 00:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3080**		24.9	mg/Kg			08/30/22 02:09	5

Client Sample ID: PH03

Lab Sample ID: 890-2847-3
Matrix: Solid
Date Collected: 08/24/22 12:05
Date Received: 08/25/22 08:39
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		08/27/22 14:13	08/30/22 00:07	1
Toluene	<0.00202	U	0.00202	mg/Kg		08/27/22 14:13	08/30/22 00:07	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		08/27/22 14:13	08/30/22 00:07	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		08/27/22 14:13	08/30/22 00:07	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		08/27/22 14:13	08/30/22 00:07	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		08/27/22 14:13	08/30/22 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*08/27/22 14:13*	*08/30/22 00:07*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/27/22 14:13*	*08/30/22 00:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			08/30/22 10:24	1

Method: 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			08/29/22 10:06	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Client Sample ID: PH03

Lab Sample ID: 890-2847-3
Matrix: Solid
Date Collected: 08/24/22 12:05
Date Received: 08/25/22 08:39
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/26/22 13:06	08/27/22 00:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/26/22 13:06	08/27/22 00:39	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/26/22 13:06	08/27/22 00:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*08/26/22 13:06*	*08/27/22 00:39*	*1*
o-Terphenyl	*104*		*70 - 130*	*08/26/22 13:06*	*08/27/22 00:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9770**		99.6		mg/Kg			08/30/22 02:18	20

Client Sample ID: FS01

Lab Sample ID: 890-2847-4
Matrix: Solid
Date Collected: 08/24/22 13:00
Date Received: 08/25/22 08:39
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/30/22 00:28	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/30/22 00:28	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/30/22 00:28	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/30/22 00:28	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/27/22 14:13	08/30/22 00:28	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/27/22 14:13	08/30/22 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*08/27/22 14:13*	*08/30/22 00:28*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*08/27/22 14:13*	*08/30/22 00:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/29/22 10:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/26/22 13:06	08/27/22 01:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/26/22 13:06	08/27/22 01:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/22 13:06	08/27/22 01:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*08/26/22 13:06*	*08/27/22 01:00*	*1*
o-Terphenyl	*91*		*70 - 130*	*08/26/22 13:06*	*08/27/22 01:00*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Client Sample ID: FS01

Lab Sample ID: 890-2847-4
Matrix: Solid
Date Collected: 08/24/22 13:00
Date Received: 08/25/22 08:39
Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2730		25.2		mg/Kg			08/30/22 02:27	5

Client Sample ID: FS02

Lab Sample ID: 890-2847-5
Matrix: Solid
Date Collected: 08/24/22 13:05
Date Received: 08/25/22 08:39
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/30/22 00:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/30/22 00:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/30/22 00:48	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/27/22 14:13	08/30/22 00:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/30/22 00:48	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/27/22 14:13	08/30/22 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*08/27/22 14:13*	*08/30/22 00:48*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*08/27/22 14:13*	*08/30/22 00:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/30/22 10:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			08/29/22 10:06	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/27/22 01:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/27/22 01:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/22 13:06	08/27/22 01:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*08/26/22 13:06*	*08/27/22 01:21*	*1*
o-Terphenyl	*82*		*70 - 130*	*08/26/22 13:06*	*08/27/22 01:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5180		50.3		mg/Kg			08/30/22 02:36	10

Surrogate Summary

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

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)
890-2842-A-1-E MS	Matrix Spike	97	104
890-2842-A-1-F MSD	Matrix Spike Duplicate	91	100
890-2847-1	PH01	93	106
890-2847-2	PH02	96	136 S1+
890-2847-3	PH03	84	102
890-2847-4	FS01	96	103
890-2847-5	FS02	98	104
LCS 880-33069/1-A	Lab Control Sample	95	101
LCSD 880-33069/2-A	Lab Control Sample Dup	92	105
MB 880-33069/5-A	Method Blank	78	120

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)
890-2842-A-1-C MS	Matrix Spike	81	78
890-2842-A-1-D MSD	Matrix Spike Duplicate	88	82
890-2847-1	PH01	76	82
890-2847-2	PH02	78	84
890-2847-3	PH03	95	104
890-2847-4	FS01	83	91
890-2847-5	FS02	76	82
LCS 880-33061/2-A	Lab Control Sample	93	106
LCSD 880-33061/3-A	Lab Control Sample Dup	92	103
MB 880-33061/1-A	Method Blank	80	94

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-33069/5-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33069

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/27/22 14:13	08/29/22 16:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/27/22 14:13	08/29/22 16:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*08/27/22 14:13*	*08/29/22 16:12*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*08/27/22 14:13*	*08/29/22 16:12*	*1*

Lab Sample ID: LCS 880-33069/1-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33069

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09832		mg/Kg		98	70 - 130		
Toluene			0.100	0.1039		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1038		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.1932		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.1029		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-33069/2-A
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33069

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1050		mg/Kg		105	70 - 130	7	35
Toluene			0.100	0.1026		mg/Kg		103	70 - 130	1	35
Ethylbenzene			0.100	0.1002		mg/Kg		100	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1844		mg/Kg		92	70 - 130	5	35
o-Xylene			0.100	0.09694		mg/Kg		97	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-2842-A-1-E MS
Matrix: Solid
Analysis Batch: 33162

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33069

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.07083		mg/Kg		71	70 - 130		
Toluene	<0.00199	U	0.0998	0.07660		mg/Kg		77	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

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

Lab Sample ID: 890-2842-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33162 — **Prep Batch: 33069**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.0998	0.07257		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1321	F1	mg/Kg		66	70 - 130
o-Xylene	<0.00199	U	0.0998	0.07263		mg/Kg		73	70 - 130

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

Lab Sample ID: 890-2842-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33162 — **Prep Batch: 33069**

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	0.08963		mg/Kg		89	70 - 130	23	35
Toluene	<0.00199	U	0.100	0.09049		mg/Kg		90	70 - 130	17	35
Ethylbenzene	<0.00199	U	0.100	0.08761		mg/Kg		87	70 - 130	19	35
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.1610		mg/Kg		80	70 - 130	20	35
o-Xylene	<0.00199	U	0.100	0.08501		mg/Kg		85	70 - 130	16	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-33061/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33016 — **Prep Batch: 33061**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 20:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 20:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/26/22 13:06	08/26/22 20:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*08/26/22 13:06*	*08/26/22 20:32*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/26/22 13:06*	*08/26/22 20:32*	*1*

Lab Sample ID: LCS 880-33061/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 33016 — **Prep Batch: 33061**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	896.9		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	884.2		mg/Kg		88	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

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

Lab Sample ID: LCS 880-33061/2-A
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33061

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	106		70 - 130

Lab Sample ID: LCSD 880-33061/3-A
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33061

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	921.3		mg/Kg		92	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	899.8		mg/Kg		90	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-2842-A-1-C MS
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33061

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	811.4		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	733.7		mg/Kg		73	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 890-2842-A-1-D MSD
Matrix: Solid
Analysis Batch: 33016

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 33061

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	875.8		mg/Kg		88	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	805.7		mg/Kg		81	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	82		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-33059/1-A
Matrix: Solid
Analysis Batch: 33244

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			08/29/22 22:09	1

Lab Sample ID: LCS 880-33059/2-A
Matrix: Solid
Analysis Batch: 33244

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.5		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-33059/3-A
Matrix: Solid
Analysis Batch: 33244

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	258.6		mg/Kg		103	90 - 110	2	20

Lab Sample ID: 890-2846-A-1-B MS
Matrix: Solid
Analysis Batch: 33244

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	522	F1	1240	1902	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 890-2846-A-1-C MSD
Matrix: Solid
Analysis Batch: 33244

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	522	F1	1240	1902	F1	mg/Kg		111	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

GC VOA

Prep Batch: 33069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Total/NA	Solid	5035	
890-2847-2	PH02	Total/NA	Solid	5035	
890-2847-3	PH03	Total/NA	Solid	5035	
890-2847-4	FS01	Total/NA	Solid	5035	
890-2847-5	FS02	Total/NA	Solid	5035	
MB 880-33069/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-33069/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-33069/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2842-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2842-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 33162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Total/NA	Solid	8021B	33069
890-2847-2	PH02	Total/NA	Solid	8021B	33069
890-2847-3	PH03	Total/NA	Solid	8021B	33069
890-2847-4	FS01	Total/NA	Solid	8021B	33069
890-2847-5	FS02	Total/NA	Solid	8021B	33069
MB 880-33069/5-A	Method Blank	Total/NA	Solid	8021B	33069
LCS 880-33069/1-A	Lab Control Sample	Total/NA	Solid	8021B	33069
LCSD 880-33069/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	33069
890-2842-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	33069
890-2842-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	33069

Analysis Batch: 33333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Total/NA	Solid	Total BTEX	
890-2847-2	PH02	Total/NA	Solid	Total BTEX	
890-2847-3	PH03	Total/NA	Solid	Total BTEX	
890-2847-4	FS01	Total/NA	Solid	Total BTEX	
890-2847-5	FS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 33016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Total/NA	Solid	8015B NM	33061
890-2847-2	PH02	Total/NA	Solid	8015B NM	33061
890-2847-3	PH03	Total/NA	Solid	8015B NM	33061
890-2847-4	FS01	Total/NA	Solid	8015B NM	33061
890-2847-5	FS02	Total/NA	Solid	8015B NM	33061
MB 880-33061/1-A	Method Blank	Total/NA	Solid	8015B NM	33061
LCS 880-33061/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	33061
LCSD 880-33061/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	33061
890-2842-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	33061
890-2842-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	33061

Prep Batch: 33061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Total/NA	Solid	8015NM Prep	
890-2847-2	PH02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

GC Semi VOA (Continued)

Prep Batch: 33061 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-3	PH03	Total/NA	Solid	8015NM Prep	
890-2847-4	FS01	Total/NA	Solid	8015NM Prep	
890-2847-5	FS02	Total/NA	Solid	8015NM Prep	
MB 880-33061/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-33061/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-33061/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2842-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2842-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 33175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Total/NA	Solid	8015 NM	
890-2847-2	PH02	Total/NA	Solid	8015 NM	
890-2847-3	PH03	Total/NA	Solid	8015 NM	
890-2847-4	FS01	Total/NA	Solid	8015 NM	
890-2847-5	FS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 33059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Soluble	Solid	DI Leach	
890-2847-2	PH02	Soluble	Solid	DI Leach	
890-2847-3	PH03	Soluble	Solid	DI Leach	
890-2847-4	FS01	Soluble	Solid	DI Leach	
890-2847-5	FS02	Soluble	Solid	DI Leach	
MB 880-33059/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-33059/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-33059/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2846-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2846-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 33244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2847-1	PH01	Soluble	Solid	300.0	33059
890-2847-2	PH02	Soluble	Solid	300.0	33059
890-2847-3	PH03	Soluble	Solid	300.0	33059
890-2847-4	FS01	Soluble	Solid	300.0	33059
890-2847-5	FS02	Soluble	Solid	300.0	33059
MB 880-33059/1-A	Method Blank	Soluble	Solid	300.0	33059
LCS 880-33059/2-A	Lab Control Sample	Soluble	Solid	300.0	33059
LCSD 880-33059/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	33059
890-2846-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	33059
890-2846-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	33059

Lab Chronicle

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Client Sample ID: PH01

Lab Sample ID: 890-2847-1

Date Collected: 08/24/22 10:00
Matrix: Solid
Date Received: 08/25/22 08:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/29/22 23:26	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33333	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33175	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/26/22 23:58	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33244	08/30/22 02:00	CH	EET MID

Client Sample ID: PH02

Lab Sample ID: 890-2847-2

Date Collected: 08/24/22 10:50
Matrix: Solid
Date Received: 08/25/22 08:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/29/22 23:47	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33333	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33175	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/27/22 00:18	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33244	08/30/22 02:09	CH	EET MID

Client Sample ID: PH03

Lab Sample ID: 890-2847-3

Date Collected: 08/24/22 12:05
Matrix: Solid
Date Received: 08/25/22 08:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/30/22 00:07	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33333	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33175	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/27/22 00:39	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	33244	08/30/22 02:18	CH	EET MID

Client Sample ID: FS01

Lab Sample ID: 890-2847-4

Date Collected: 08/24/22 13:00
Matrix: Solid
Date Received: 08/25/22 08:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/30/22 00:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33333	08/30/22 10:24	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Client Sample ID: FS01

Lab Sample ID: 890-2847-4
Matrix: Solid
Date Collected: 08/24/22 13:00
Date Received: 08/25/22 08:39

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			33175	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/27/22 01:00	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	33244	08/30/22 02:27	CH	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-2847-5
Matrix: Solid
Date Collected: 08/24/22 13:05
Date Received: 08/25/22 08:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	33069	08/27/22 14:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	33162	08/30/22 00:48	MR	EET MID
Total/NA	Analysis	Total BTEX		1			33333	08/30/22 10:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			33175	08/29/22 10:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	33061	08/26/22 13:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	33016	08/27/22 01:21	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	33059	08/26/22 12:53	SMC	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	33244	08/30/22 02:36	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 PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

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 PIERCE CANYON 17 SWD 1

Job ID: 890-2847-1
SDG: 03E1558087

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2847-1	PH01	Solid	08/24/22 10:00	08/25/22 08:39	2
890-2847-2	PH02	Solid	08/24/22 10:50	08/25/22 08:39	2
890-2847-3	PH03	Solid	08/24/22 12:05	08/25/22 08:39	2
890-2847-4	FS01	Solid	08/24/22 13:00	08/25/22 08:39	1
890-2847-5	FS02	Solid	08/24/22 13:05	08/25/22 08:39	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)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU Pierce Canyon 17 SWD 1	**Turn Around**	
Project Number:	03E155 8087	☐ Routine ☑ Rush	
Project Location:		Due Date:	2 DAY
Sampler's Name:	Conner Shore	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:	NM 007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.2	
Total Containers:		Corrected Temperature:	4.0	

ANALYSIS REQUEST

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)	Parameters	Sample Comments
PH01	S	08.24.22	1000	2'	G	1		x	x	x		Incident ID:
PH02	S	08.24.22	1050	2'	G	1		x	x	x		nAPP2216879315
PH03	S	08.24.22	1205	2'	G	1		x	x	x		Cost Center: 1090741001
FS01	S	08.24.22	1300	1'	C	1		x	x	x		
FS02	S	08.24.22	1305	1'	C	1		x	x	x		AFE:

890-2847 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8.25.22 839	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2847-1
SDG Number: 03E1558087

Login Number: 2847
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2847-1
SDG Number: 03E1558087

Login Number: 2847
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 08/26/22 11:03 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/13/2023 7:53:34 AM

JOB DESCRIPTION

PLU PC17 Fed SW 0001
03C1558087

JOB NUMBER

890-5712-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

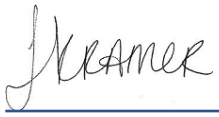
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
12/13/2023 7:53:34 AM

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

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Laboratory Job ID: 890-5712-1
SDG: 03C1558087

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-5712-1
Project/Site: PLU PC17 Fed SW 0001 SDG: 03C1558087

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD 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 PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Job ID: 890-5712-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5712-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 12/4/2023 8:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions
The following samples > were received and analyzed from an unpreserved bulk soil jar: FS 03 (890-5712-1), FS 04 (890-5712-2), FS 07 (890-5712-3), FS 09 (890-5712-4), SW 04 (890-5712-5), FS 06 (890-5712-6), FS 15 (890-5712-7), FS 16 (890-5712-8), SW 02 (890-5712-9), SW 03 (890-5712-10), FS 10 (890-5712-11), FS 11 (890-5712-12), FS 12 (890-5712-13), FS 13 (890-5712-14), FS 14 (890-5712-15), FS 17 (890-5712-16), FS 18 (890-5712-17), FS 19 (890-5712-18), FS 20 (890-5712-19), SW 05 (890-5712-20), SW 06 (890-5712-21), FS 21 (890-5712-22), FS 22 (890-5712-23), FS 05 (890-5712-24), FS 08 (890-5712-25) and SW 01 (890-5712-26).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-68391 and analytical batch 880-68741 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-68391 and analytical batch 880-68741 was outside the control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-68741 recovered under the lower control limit for Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-68401/1-A) and (LCSD 880-68401/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-5712-A-1-E MS) and (890-5712-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS 09 (890-5712-4), SW 04 (890-5712-5), FS 06 (890-5712-6), FS 15 (890-5712-7), FS 16 (890-5712-8) and SW 03 (890-5712-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS 17 (890-5712-16), FS 19 (890-5712-18), FS 20 (890-5712-19) and SW 05 (890-5712-20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-68401 and analytical batch 880-68650 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Case Narrative

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Job ID: 890-5712-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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 880-68386 and analytical batch 880-68368 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-36387-A-4-F MS) and (880-36387-A-4-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS 04 (890-5712-2) and FS 07 (890-5712-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-68368/20). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-68386 and analytical batch 880-68368 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-68368 recovered above the upper control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-68368/20).

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-68410 and analytical batch 880-68448 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS 09 (890-5712-4), SW 04 (890-5712-5), FS 06 (890-5712-6), FS 15 (890-5712-7), SW 03 (890-5712-10), FS 10 (890-5712-11), FS 12 (890-5712-13), (890-5712-A-4-C MS) and (890-5712-A-4-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS 13 (890-5712-14), FS 17 (890-5712-16), FS 18 (890-5712-17), SW 05 (890-5712-20) and SW 06 (890-5712-21). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-68547 and analytical batch 880-68559 was outside the upper control limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-68405 and analytical batch 880-68428 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 PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 03

Lab Sample ID: 890-5712-1
Matrix: Solid
Date Collected: 11/27/23 10:30
Date Received: 12/04/23 08:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1	0.00200		mg/Kg		12/05/23 10:27	12/09/23 19:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 19:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 19:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/09/23 19:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 19:47	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/09/23 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*12/05/23 10:27*	*12/09/23 19:47*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/05/23 10:27*	*12/09/23 19:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/09/23 19:47	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			12/05/23 17:47	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		12/05/23 12:10	12/05/23 17:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/23 12:10	12/05/23 17:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/23 12:10	12/05/23 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*12/05/23 12:10*	*12/05/23 17:47*	*1*
o-Terphenyl	*114*		*70 - 130*	*12/05/23 12:10*	*12/05/23 17:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**771**		49.5		mg/Kg			12/05/23 17:46	10

Client Sample ID: FS 04

Lab Sample ID: 890-5712-2
Matrix: Solid
Date Collected: 11/27/23 10:35
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/09/23 20:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 20:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 20:13	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/09/23 20:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 20:13	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/09/23 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*12/05/23 10:27*	*12/09/23 20:13*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*12/05/23 10:27*	*12/09/23 20:13*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 04

Date Collected: 11/27/23 10:35
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-2
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/09/23 20:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			12/05/23 18:09	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	<50.1	U	50.1		mg/Kg		12/05/23 12:10	12/05/23 18:09	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		12/05/23 12:10	12/05/23 18:09	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		12/05/23 12:10	12/05/23 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*12/05/23 12:10*	*12/05/23 18:09*	*1*
o-Terphenyl	*115*		*70 - 130*	*12/05/23 12:10*	*12/05/23 18:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1940**		25.0		mg/Kg			12/05/23 18:05	5

Client Sample ID: FS 07

Date Collected: 11/27/23 13:50
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/05/23 10:27	12/09/23 20:40	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/05/23 10:27	12/09/23 20:40	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/05/23 10:27	12/09/23 20:40	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/05/23 10:27	12/09/23 20:40	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/05/23 10:27	12/09/23 20:40	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/05/23 10:27	12/09/23 20:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*12/05/23 10:27*	*12/09/23 20:40*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*12/05/23 10:27*	*12/09/23 20:40*	*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			12/09/23 20:40	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			12/05/23 18:30	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		12/05/23 12:10	12/05/23 18:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/05/23 12:10	12/05/23 18:30	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 07

Lab Sample ID: 890-5712-3
Matrix: Solid
Date Collected: 11/27/23 13:50
Date Received: 12/04/23 08:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/05/23 12:10	12/05/23 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*151*	*S1+*	*70 - 130*	*12/05/23 12:10*	*12/05/23 18:30*	*1*
o-Terphenyl	*129*		*70 - 130*	*12/05/23 12:10*	*12/05/23 18:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**228**		4.97		mg/Kg			12/05/23 18:12	1

Client Sample ID: FS 09

Lab Sample ID: 890-5712-4
Matrix: Solid
Date Collected: 11/27/23 13:55
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/09/23 21:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 21:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 21:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/09/23 21:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 21:07	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/09/23 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*167*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/09/23 21:07*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*12/05/23 10:27*	*12/09/23 21:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/09/23 21:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			12/06/23 12:21	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	<50.1	U	50.1		mg/Kg		12/05/23 12:25	12/06/23 12:21	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		12/05/23 12:25	12/06/23 12:21	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		12/05/23 12:25	12/06/23 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 12:21*	*1*
o-Terphenyl	*119*		*70 - 130*	*12/05/23 12:25*	*12/06/23 12:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.1**		5.00		mg/Kg			12/05/23 18:18	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: SW 04

Date Collected: 11/28/23 10:20
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-5
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		12/05/23 10:27	12/09/23 21:34	1
Toluene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/09/23 21:34	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/09/23 21:34	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/09/23 21:34	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/09/23 21:34	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/09/23 21:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*167*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/09/23 21:34*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*12/05/23 10:27*	*12/09/23 21:34*	*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			12/09/23 21:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			12/06/23 13:26	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	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 13:26	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 13:26	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 13:26*	*1*
o-Terphenyl	*112*		*70 - 130*	*12/05/23 12:25*	*12/06/23 13:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**119**		5.00		mg/Kg			12/05/23 18:25	1

Client Sample ID: FS 06

Date Collected: 11/28/23 10:25
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 22:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 22:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 22:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/09/23 22:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 22:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/09/23 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*159*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/09/23 22:00*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*12/05/23 10:27*	*12/09/23 22:00*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 06

Date Collected: 11/28/23 10:25
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-6
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/09/23 22:00	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			12/06/23 13:47	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		12/05/23 12:25	12/06/23 13:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 13:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 13:47*	*1*
o-Terphenyl	*109*		*70 - 130*	*12/05/23 12:25*	*12/06/23 13:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**141**		4.96		mg/Kg			12/05/23 18:45	1

Client Sample ID: FS 15

Date Collected: 11/28/23 10:30
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 22:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 22:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 22:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/09/23 22:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 22:26	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/09/23 22:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/09/23 22:26*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*12/05/23 10:27*	*12/09/23 22:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/09/23 22:26	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			12/06/23 14:09	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		12/05/23 12:25	12/06/23 14:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/05/23 12:25	12/06/23 14:09	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 15

Date Collected: 11/28/23 10:30
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/05/23 12:25	12/06/23 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*153*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 14:09*	*1*
o-Terphenyl	*125*		*70 - 130*	*12/05/23 12:25*	*12/06/23 14:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.3**		4.97		mg/Kg			12/05/23 18:51	1

Client Sample ID: FS 16

Date Collected: 11/28/23 10:35
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-8
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		12/05/23 10:27	12/09/23 22:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 22:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 22:52	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/09/23 22:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/09/23 22:52	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/09/23 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*161*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/09/23 22:52*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*12/05/23 10:27*	*12/09/23 22:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/09/23 22:52	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			12/06/23 14:31	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	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 14:31	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 14:31	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*12/05/23 12:25*	*12/06/23 14:31*	*1*
o-Terphenyl	*102*		*70 - 130*	*12/05/23 12:25*	*12/06/23 14:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**102**		4.98		mg/Kg			12/05/23 18:58	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: SW 02

Lab Sample ID: 890-5712-9
Matrix: Solid
Date Collected: 11/29/23 10:15
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/09/23 23:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 23:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 23:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/09/23 23:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/09/23 23:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/09/23 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*12/05/23 10:27*	*12/09/23 23:17*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*12/05/23 10:27*	*12/09/23 23:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/09/23 23:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			12/06/23 14:53	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	<49.6	U	49.6		mg/Kg		12/05/23 12:25	12/06/23 14:53	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		12/05/23 12:25	12/06/23 14:53	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		12/05/23 12:25	12/06/23 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*12/05/23 12:25*	*12/06/23 14:53*	*1*
o-Terphenyl	*106*		*70 - 130*	*12/05/23 12:25*	*12/06/23 14:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.5**		5.00		mg/Kg			12/05/23 19:04	1

Client Sample ID: SW 03

Lab Sample ID: 890-5712-10
Matrix: Solid
Date Collected: 11/29/23 10:30
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/09/23 23:42	1
Toluene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/09/23 23:42	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/09/23 23:42	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/09/23 23:42	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/09/23 23:42	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/09/23 23:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/09/23 23:42*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*12/05/23 10:27*	*12/09/23 23:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: SW 03

Lab Sample ID: 890-5712-10
Matrix: Solid
Date Collected: 11/29/23 10:30
Date Received: 12/04/23 08:17

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			12/09/23 23:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			12/06/23 15:15	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	<50.2	U	50.2		mg/Kg		12/05/23 12:25	12/06/23 15:15	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		12/05/23 12:25	12/06/23 15:15	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		12/05/23 12:25	12/06/23 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 15:15*	*1*
o-Terphenyl	*113*		*70 - 130*	*12/05/23 12:25*	*12/06/23 15:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.21**		5.05		mg/Kg			12/05/23 19:11	1

Client Sample ID: FS 10

Lab Sample ID: 890-5712-11
Matrix: Solid
Date Collected: 12/01/23 09:00
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 01:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 01:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 01:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/10/23 01:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 01:25	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/10/23 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*12/05/23 10:27*	*12/10/23 01:25*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*12/05/23 10:27*	*12/10/23 01:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/10/23 01:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			12/06/23 15:37	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	<50.3	U	50.3		mg/Kg		12/05/23 12:25	12/06/23 15:37	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		12/05/23 12:25	12/06/23 15:37	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 10

Lab Sample ID: 890-5712-11
Matrix: Solid
Date Collected: 12/01/23 09:00
Date Received: 12/04/23 08:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		12/05/23 12:25	12/06/23 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*144*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 15:37*	*1*
o-Terphenyl	*123*		*70 - 130*	*12/05/23 12:25*	*12/06/23 15:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.5**		4.98		mg/Kg			12/05/23 19:17	1

Client Sample ID: FS 11

Lab Sample ID: 890-5712-12
Matrix: Solid
Date Collected: 12/01/23 09:05
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 01:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 01:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 01:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/10/23 01:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 01:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/10/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*12/05/23 10:27*	*12/10/23 01:50*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*12/05/23 10:27*	*12/10/23 01:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/10/23 01:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			12/06/23 15:59	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	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 15:59	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 15:59	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*12/05/23 12:25*	*12/06/23 15:59*	*1*
o-Terphenyl	*105*		*70 - 130*	*12/05/23 12:25*	*12/06/23 15:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**207**		5.05		mg/Kg			12/05/23 19:37	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 12

Lab Sample ID: 890-5712-13
Matrix: Solid
Date Collected: 12/01/23 09:10
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 02:16	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 02:16	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 02:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/10/23 02:16	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 02:16	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/10/23 02:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*12/05/23 10:27*	*12/10/23 02:16*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*12/05/23 10:27*	*12/10/23 02:16*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/10/23 02:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/06/23 16:21	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		12/05/23 12:25	12/06/23 16:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 16:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 16:21*	*1*
o-Terphenyl	*112*		*70 - 130*	*12/05/23 12:25*	*12/06/23 16:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.1**		4.96		mg/Kg			12/05/23 19:43	1

Client Sample ID: FS 13

Lab Sample ID: 890-5712-14
Matrix: Solid
Date Collected: 12/01/23 09:15
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 02:42	1
Toluene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/10/23 02:42	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/10/23 02:42	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/10/23 02:42	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/10/23 02:42	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/10/23 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*12/05/23 10:27*	*12/10/23 02:42*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*12/05/23 10:27*	*12/10/23 02:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 13

Lab Sample ID: 890-5712-14
Matrix: Solid
Date Collected: 12/01/23 09:15
Date Received: 12/04/23 08:17

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			12/10/23 02:42	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			12/06/23 17:06	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		12/05/23 12:25	12/06/23 17:06	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/05/23 12:25	12/06/23 17:06	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/05/23 12:25	12/06/23 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 17:06*	*1*
o-Terphenyl	*114*		*70 - 130*	*12/05/23 12:25*	*12/06/23 17:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25.1**		5.00		mg/Kg			12/05/23 20:03	1

Client Sample ID: FS 14

Lab Sample ID: 890-5712-15
Matrix: Solid
Date Collected: 12/01/23 09:20
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 03:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 03:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 03:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/10/23 03:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 03:07	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/10/23 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*12/05/23 10:27*	*12/10/23 03:07*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*12/05/23 10:27*	*12/10/23 03:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/10/23 03:07	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			12/06/23 17:28	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		12/05/23 12:25	12/06/23 17:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 17:28	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 14

Lab Sample ID: 890-5712-15
Matrix: Solid
Date Collected: 12/01/23 09:20
Date Received: 12/04/23 08:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*12/05/23 12:25*	*12/06/23 17:28*	*1*
o-Terphenyl	*96*		*70 - 130*	*12/05/23 12:25*	*12/06/23 17:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**248**		4.97		mg/Kg			12/05/23 20:10	1

Client Sample ID: FS 17

Lab Sample ID: 890-5712-16
Matrix: Solid
Date Collected: 12/01/23 09:25
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 03:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 03:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 03:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/10/23 03:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 03:33	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/10/23 03:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/10/23 03:33*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*12/05/23 10:27*	*12/10/23 03:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/10/23 03:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			12/06/23 17:49	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	<50.1	U	50.1		mg/Kg		12/05/23 12:25	12/06/23 17:49	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		12/05/23 12:25	12/06/23 17:49	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		12/05/23 12:25	12/06/23 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 17:49*	*1*
o-Terphenyl	*122*		*70 - 130*	*12/05/23 12:25*	*12/06/23 17:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1870**		24.8		mg/Kg			12/05/23 20:16	5

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 18

Lab Sample ID: 890-5712-17
Matrix: Solid
Date Collected: 12/01/23 09:30
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 03:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 03:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 03:59	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/10/23 03:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 03:59	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/05/23 10:27	12/10/23 03:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*12/05/23 10:27*	*12/10/23 03:59*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/05/23 10:27*	*12/10/23 03:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/10/23 03:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			12/06/23 18:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		12/05/23 12:25	12/06/23 18:10	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		12/05/23 12:25	12/06/23 18:10	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		12/05/23 12:25	12/06/23 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 18:10*	*1*
o-Terphenyl	*112*		*70 - 130*	*12/05/23 12:25*	*12/06/23 18:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2190**		25.2		mg/Kg			12/05/23 20:23	5

Client Sample ID: FS 19

Lab Sample ID: 890-5712-18
Matrix: Solid
Date Collected: 12/01/23 09:35
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 04:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 04:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 04:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/10/23 04:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 10:27	12/10/23 04:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 10:27	12/10/23 04:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*164*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/10/23 04:24*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*12/05/23 10:27*	*12/10/23 04:24*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 19

Lab Sample ID: 890-5712-18
Matrix: Solid
Date Collected: 12/01/23 09:35
Date Received: 12/04/23 08:17

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/10/23 04:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			12/06/23 18:31	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	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 18:31	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 18:31	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*12/05/23 12:25*	*12/06/23 18:31*	*1*
o-Terphenyl	*107*		*70 - 130*	*12/05/23 12:25*	*12/06/23 18:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2110**		25.0		mg/Kg			12/05/23 20:29	5

Client Sample ID: FS 20

Lab Sample ID: 890-5712-19
Matrix: Solid
Date Collected: 12/01/23 09:40
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 04:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 04:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 04:50	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/10/23 04:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 10:27	12/10/23 04:50	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/05/23 10:27	12/10/23 04:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/10/23 04:50*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*12/05/23 10:27*	*12/10/23 04:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/10/23 04:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			12/06/23 18:54	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	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 18:54	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 18:54	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 20

Lab Sample ID: 890-5712-19
Date Collected: 12/01/23 09:40
Matrix: Solid
Date Received: 12/04/23 08:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		12/05/23 12:25	12/06/23 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*12/05/23 12:25*	*12/06/23 18:54*	*1*
o-Terphenyl	*108*		*70 - 130*	*12/05/23 12:25*	*12/06/23 18:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3460**		49.9		mg/Kg			12/05/23 20:36	10

Client Sample ID: SW 05

Lab Sample ID: 890-5712-20
Date Collected: 12/01/23 11:45
Matrix: Solid
Date Received: 12/04/23 08:17

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		12/05/23 10:27	12/10/23 05:16	1
Toluene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/10/23 05:16	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/10/23 05:16	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/10/23 05:16	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		12/05/23 10:27	12/10/23 05:16	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		12/05/23 10:27	12/10/23 05:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*	*12/05/23 10:27*	*12/10/23 05:16*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*12/05/23 10:27*	*12/10/23 05:16*	*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			12/10/23 05:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/06/23 19:15	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		12/05/23 12:25	12/06/23 19:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/05/23 12:25	12/06/23 19:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/05/23 12:25	12/06/23 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 19:15*	*1*
o-Terphenyl	*113*		*70 - 130*	*12/05/23 12:25*	*12/06/23 19:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**565**		24.8		mg/Kg			12/05/23 20:42	5

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: SW 06

Lab Sample ID: 890-5712-21
Matrix: Solid
Date Collected: 12/01/23 14:25
Date Received: 12/04/23 08:17

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		12/05/23 12:45	12/10/23 00:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 00:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 00:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/05/23 12:45	12/10/23 00:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 00:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/05/23 12:45	12/10/23 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*12/05/23 12:45*	*12/10/23 00:08*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*12/05/23 12:45*	*12/10/23 00:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			12/10/23 00:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			12/06/23 19:37	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	<50.3	U	50.3		mg/Kg		12/05/23 12:25	12/06/23 19:37	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		12/05/23 12:25	12/06/23 19:37	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		12/05/23 12:25	12/06/23 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*12/05/23 12:25*	*12/06/23 19:37*	*1*
o-Terphenyl	*120*		*70 - 130*	*12/05/23 12:25*	*12/06/23 19:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2470**		25.0		mg/Kg			12/05/23 20:29	5

Client Sample ID: FS 21

Lab Sample ID: 890-5712-22
Matrix: Solid
Date Collected: 12/01/23 14:55
Date Received: 12/04/23 08:17

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		12/05/23 12:45	12/10/23 00:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 00:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 00:29	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/05/23 12:45	12/10/23 00:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 00:29	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/05/23 12:45	12/10/23 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*12/05/23 12:45*	*12/10/23 00:29*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*12/05/23 12:45*	*12/10/23 00:29*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 21

Lab Sample ID: 890-5712-22
Matrix: Solid
Date Collected: 12/01/23 14:55
Date Received: 12/04/23 08:17

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			12/10/23 00:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			12/06/23 19:59	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	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 19:59	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 19:59	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		12/05/23 12:25	12/06/23 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*12/05/23 12:25*	*12/06/23 19:59*	*1*
o-Terphenyl	*108*		*70 - 130*	*12/05/23 12:25*	*12/06/23 19:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2920**		24.8		mg/Kg			12/05/23 20:35	5

Client Sample ID: FS 22

Lab Sample ID: 890-5712-23
Matrix: Solid
Date Collected: 12/01/23 15:00
Date Received: 12/04/23 08:17

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		12/05/23 12:45	12/10/23 00:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 12:45	12/10/23 00:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 12:45	12/10/23 00:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 12:45	12/10/23 00:49	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 12:45	12/10/23 00:49	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 12:45	12/10/23 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*12/05/23 12:45*	*12/10/23 00:49*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*12/05/23 12:45*	*12/10/23 00:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/10/23 00:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			12/06/23 20:21	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	<49.6	U	49.6		mg/Kg		12/05/23 12:25	12/06/23 20:21	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		12/05/23 12:25	12/06/23 20:21	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 22

Lab Sample ID: 890-5712-23
Matrix: Solid
Date Collected: 12/01/23 15:00
Date Received: 12/04/23 08:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		12/05/23 12:25	12/06/23 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*12/05/23 12:25*	*12/06/23 20:21*	*1*
o-Terphenyl	*105*		*70 - 130*	*12/05/23 12:25*	*12/06/23 20:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**230**		4.95		mg/Kg			12/05/23 20:41	1

Client Sample ID: FS 05

Lab Sample ID: 890-5712-24
Matrix: Solid
Date Collected: 12/01/23 15:15
Date Received: 12/04/23 08:17

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		12/05/23 12:45	12/10/23 01:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/05/23 12:45	12/10/23 01:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/05/23 12:45	12/10/23 01:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/05/23 12:45	12/10/23 01:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/05/23 12:45	12/10/23 01:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/05/23 12:45	12/10/23 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*12/05/23 12:45*	*12/10/23 01:09*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*12/05/23 12:45*	*12/10/23 01:09*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/10/23 01:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			12/07/23 10:24	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	<50.1	U	50.1		mg/Kg		12/06/23 17:12	12/07/23 10:24	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		12/06/23 17:12	12/07/23 10:24	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		12/06/23 17:12	12/07/23 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*12/06/23 17:12*	*12/07/23 10:24*	*1*
o-Terphenyl	*97*		*70 - 130*	*12/06/23 17:12*	*12/07/23 10:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2060**		25.3		mg/Kg			12/05/23 20:58	5

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 08

Lab Sample ID: 890-5712-25
Matrix: Solid
Date Collected: 12/01/23 15:20
Date Received: 12/04/23 08:17

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		12/05/23 12:45	12/10/23 01:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 01:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 01:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/05/23 12:45	12/10/23 01:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/05/23 12:45	12/10/23 01:30	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/05/23 12:45	12/10/23 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*12/05/23 12:45*	*12/10/23 01:30*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*12/05/23 12:45*	*12/10/23 01:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/10/23 01:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			12/07/23 11:29	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	<49.7	U	49.7		mg/Kg		12/06/23 17:12	12/07/23 11:29	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		12/06/23 17:12	12/07/23 11:29	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		12/06/23 17:12	12/07/23 11:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*12/06/23 17:12*	*12/07/23 11:29*	*1*
o-Terphenyl	*93*		*70 - 130*	*12/06/23 17:12*	*12/07/23 11:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1890**		25.1		mg/Kg			12/05/23 21:03	5

Client Sample ID: SW 01

Lab Sample ID: 890-5712-26
Matrix: Solid
Date Collected: 12/01/23 15:10
Date Received: 12/04/23 08:17

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		12/05/23 12:45	12/10/23 01:50	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/05/23 12:45	12/10/23 01:50	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/05/23 12:45	12/10/23 01:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/05/23 12:45	12/10/23 01:50	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/05/23 12:45	12/10/23 01:50	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/05/23 12:45	12/10/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*12/05/23 12:45*	*12/10/23 01:50*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*12/05/23 12:45*	*12/10/23 01:50*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: SW 01

Date Collected: 12/01/23 15:10
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-26

Matrix: Solid

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			12/10/23 01:50	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			12/07/23 11:51	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		12/06/23 17:12	12/07/23 11:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/23 17:12	12/07/23 11:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/23 17:12	12/07/23 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*12/06/23 17:12*	*12/07/23 11:51*	*1*
o-Terphenyl	*94*		*70 - 130*	*12/06/23 17:12*	*12/07/23 11:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.0**		4.99		mg/Kg			12/05/23 21:09	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-36564-A-41-J MS	Matrix Spike	94	106
880-36564-A-41-K MSD	Matrix Spike Duplicate	99	105
890-5712-1	FS 03	112	93
890-5712-1 MS	FS 03	135 S1+	77
890-5712-1 MSD	FS 03	157 S1+	98
890-5712-2	FS 04	128	92
890-5712-3	FS 07	115	89
890-5712-4	FS 09	167 S1+	86
890-5712-5	SW 04	167 S1+	104
890-5712-6	FS 06	159 S1+	105
890-5712-7	FS 15	152 S1+	94
890-5712-8	FS 16	161 S1+	123
890-5712-9	SW 02	125	71
890-5712-10	SW 03	147 S1+	104
890-5712-11	FS 10	120	90
890-5712-12	FS 11	127	97
890-5712-13	FS 12	125	94
890-5712-14	FS 13	98	74
890-5712-15	FS 14	125	91
890-5712-16	FS 17	145 S1+	90
890-5712-17	FS 18	119	93
890-5712-18	FS 19	164 S1+	114
890-5712-19	FS 20	135 S1+	89
890-5712-20	SW 05	158 S1+	116
890-5712-21	SW 06	75	75
890-5712-22	FS 21	82	75
890-5712-23	FS 22	79	74
890-5712-24	FS 05	78	83
890-5712-25	FS 08	78	77
890-5712-26	SW 01	76	76
LCS 880-68391/1-A	Lab Control Sample	91	106
LCS 880-68401/1-A	Lab Control Sample	147 S1+	89
LCSD 880-68391/2-A	Lab Control Sample Dup	93	104
LCSD 880-68401/2-A	Lab Control Sample Dup	134 S1+	79
MB 880-68391/5-A	Method Blank	66 S1-	94
MB 880-68401/5-B	Method Blank	77	83
MB 880-68650/39	Method Blank	86	96

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-36387-A-4-F MS	Matrix Spike	151 S1+	107
880-36387-A-4-G MSD	Matrix Spike Duplicate	149 S1+	106

Surrogate Summary

Client: Ensolum Job ID: 890-5712-1
Project/Site: PLU PC17 Fed SW 0001 SDG: 03C1558087

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5712-1	FS 03	129	114
890-5712-2	FS 04	132 S1+	115
890-5712-3	FS 07	151 S1+	129
890-5712-4	FS 09	138 S1+	119
890-5712-4 MS	FS 09	142 S1+	96
890-5712-4 MSD	FS 09	143 S1+	98
890-5712-5	SW 04	133 S1+	112
890-5712-6	FS 06	133 S1+	109
890-5712-7	FS 15	153 S1+	125
890-5712-8	FS 16	124	102
890-5712-9	SW 02	125	106
890-5712-10	SW 03	135 S1+	113
890-5712-11	FS 10	144 S1+	123
890-5712-12	FS 11	128	105
890-5712-13	FS 12	131 S1+	112
890-5712-14	FS 13	135 S1+	114
890-5712-15	FS 14	114	96
890-5712-16	FS 17	143 S1+	122
890-5712-17	FS 18	133 S1+	112
890-5712-18	FS 19	127	107
890-5712-19	FS 20	128	108
890-5712-20	SW 05	134 S1+	113
890-5712-21	SW 06	147 S1+	120
890-5712-22	FS 21	130	108
890-5712-23	FS 22	122	105
890-5712-24	FS 05	87	97
890-5712-24 MS	FS 05	95	84
890-5712-24 MSD	FS 05	85	84
890-5712-25	FS 08	79	93
890-5712-26	SW 01	90	94
LCS 880-68386/2-A	Lab Control Sample	114	115
LCS 880-68410/2-A	Lab Control Sample	112	115
LCS 880-68547/2-A	Lab Control Sample	93	97
LCSD 880-68386/3-A	Lab Control Sample Dup	112	102
LCSD 880-68410/3-A	Lab Control Sample Dup	106	94
LCSD 880-68547/3-A	Lab Control Sample Dup	80	85
MB 880-68386/1-A	Method Blank	192 S1+	183 S1+
MB 880-68410/1-A	Method Blank	185 S1+	165 S1+
MB 880-68547/1-A	Method Blank	139 S1+	153 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-68391/5-A
Matrix: Solid
Analysis Batch: 68741

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68391

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/07/23 13:40	12/09/23 18:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/07/23 13:40	12/09/23 18:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/07/23 13:40	12/09/23 18:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/07/23 13:40	12/09/23 18:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/07/23 13:40	12/09/23 18:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/07/23 13:40	12/09/23 18:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*12/07/23 13:40*	*12/09/23 18:59*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*12/07/23 13:40*	*12/09/23 18:59*	*1*

Lab Sample ID: LCS 880-68391/1-A
Matrix: Solid
Analysis Batch: 68741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68391

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09894		mg/Kg		99	70 - 130		
Toluene			0.100	0.09159		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.09232		mg/Kg		92	70 - 130		
m-Xylene & p-Xylene			0.200	0.1891		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.08883		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-68391/2-A
Matrix: Solid
Analysis Batch: 68741

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68391

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08759		mg/Kg		88	70 - 130	12	35
Toluene			0.100	0.08082		mg/Kg		81	70 - 130	12	35
Ethylbenzene			0.100	0.08319		mg/Kg		83	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.1690		mg/Kg		85	70 - 130	11	35
o-Xylene			0.100	0.07985		mg/Kg		80	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-36564-A-41-J MS
Matrix: Solid
Analysis Batch: 68741

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 68391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.0178	F1	0.0990	0.08263	F1	mg/Kg		65	70 - 130		
Toluene	0.162	F1	0.0990	0.07071	F1	mg/Kg		-92	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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

Lab Sample ID: 880-36564-A-41-J MS
Matrix: Solid
Analysis Batch: 68741

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 68391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.0199	F1	0.0990	0.06740	F1	mg/Kg		48	70 - 130
m-Xylene & p-Xylene	0.0555	F1	0.198	0.1332	F1	mg/Kg		39	70 - 130
o-Xylene	0.0400	F1	0.0990	0.06437	F1	mg/Kg		25	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-36564-A-41-K MSD
Matrix: Solid
Analysis Batch: 68741

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 68391

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0178	F1	0.0990	0.07905	F1	mg/Kg		62	70 - 130	4	35
Toluene	0.162	F1	0.0990	0.06539	F1	mg/Kg		-97	70 - 130	8	35
Ethylbenzene	0.0199	F1	0.0990	0.06388	F1	mg/Kg		44	70 - 130	5	35
m-Xylene & p-Xylene	0.0555	F1	0.198	0.1267	F1	mg/Kg		36	70 - 130	5	35
o-Xylene	0.0400	F1	0.0990	0.06192	F1	mg/Kg		22	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: MB 880-68401/5-B
Matrix: Solid
Analysis Batch: 68650

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68401

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/05/23 10:27	12/09/23 19:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/05/23 10:27	12/09/23 19:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/05/23 10:27	12/09/23 19:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/05/23 10:27	12/09/23 19:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/05/23 10:27	12/09/23 19:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/05/23 10:27	12/09/23 19:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*12/05/23 10:27*	*12/09/23 19:20*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*12/05/23 10:27*	*12/09/23 19:20*	*1*

Lab Sample ID: LCS 880-68401/1-A
Matrix: Solid
Analysis Batch: 68650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68401

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08730		mg/Kg		87	70 - 130
Toluene	0.100	0.1010		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.09458		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	0.200	0.1832		mg/Kg		92	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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

Lab Sample ID: LCS 880-68401/1-A
Matrix: Solid
Analysis Batch: 68650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68401

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09973		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-68401/2-A
Matrix: Solid
Analysis Batch: 68650

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68401

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07833		mg/Kg		78	70 - 130	11	35
Toluene			0.100	0.08724		mg/Kg		87	70 - 130	15	35
Ethylbenzene			0.100	0.09061		mg/Kg		91	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1675		mg/Kg		84	70 - 130	9	35
o-Xylene			0.100	0.09106		mg/Kg		91	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 890-5712-1 MS
Matrix: Solid
Analysis Batch: 68650

Client Sample ID: FS 03
Prep Type: Total/NA
Prep Batch: 68401

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1	0.0996	0.06908	F1	mg/Kg		69	70 - 130		
Toluene	<0.00200	U	0.0996	0.07271		mg/Kg		73	70 - 130		
Ethylbenzene	<0.00200	U	0.0996	0.07359		mg/Kg		74	70 - 130		
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1421		mg/Kg		71	70 - 130		
o-Xylene	<0.00200	U	0.0996	0.07467		mg/Kg		75	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*

Lab Sample ID: 890-5712-1 MSD
Matrix: Solid
Analysis Batch: 68650

Client Sample ID: FS 03
Prep Type: Total/NA
Prep Batch: 68401

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0990	0.07938		mg/Kg		80	70 - 130	14	35
Toluene	<0.00200	U	0.0990	0.08664		mg/Kg		88	70 - 130	17	35
Ethylbenzene	<0.00200	U	0.0990	0.08058		mg/Kg		81	70 - 130	9	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1515		mg/Kg		77	70 - 130	6	35
o-Xylene	<0.00200	U	0.0990	0.08275		mg/Kg		84	70 - 130	10	35

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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

Lab Sample ID: 890-5712-1 MSD
Matrix: Solid
Analysis Batch: 68650

Client Sample ID: FS 03
Prep Type: Total/NA
Prep Batch: 68401

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	157	S1+	70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: MB 880-68650/39
Matrix: Solid
Analysis Batch: 68650

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			12/09/23 06:22	1
Toluene	<0.00200	U	0.00200		mg/Kg			12/09/23 06:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			12/09/23 06:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			12/09/23 06:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			12/09/23 06:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			12/09/23 06:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		12/09/23 06:22	1
1,4-Difluorobenzene (Surr)	96		70 - 130		12/09/23 06:22	1

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

Lab Sample ID: MB 880-68386/1-A
Matrix: Solid
Analysis Batch: 68368

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68386

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		12/05/23 07:30	12/05/23 07:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/23 07:30	12/05/23 07:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/23 07:30	12/05/23 07:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	192	S1+	70 - 130	12/05/23 07:30	12/05/23 07:57	1
o-Terphenyl	183	S1+	70 - 130	12/05/23 07:30	12/05/23 07:57	1

Lab Sample ID: LCS 880-68386/2-A
Matrix: Solid
Analysis Batch: 68368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68386

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1179		mg/Kg		118	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1191		mg/Kg		119	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	115		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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

Lab Sample ID: LCSD 880-68386/3-A
Matrix: Solid
Analysis Batch: 68368

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68386

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1178		mg/Kg		118	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	1161		mg/Kg		116	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: 880-36387-A-4-F MS
Matrix: Solid
Analysis Batch: 68368

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 68386

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1010	1188		mg/Kg		115	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U F1	1010	1447	F1	mg/Kg		141	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*151*	*S1+*	*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 880-36387-A-4-G MSD
Matrix: Solid
Analysis Batch: 68368

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 68386

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	1010	1001		mg/Kg		97	70 - 130	17	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	1010	1444	F1	mg/Kg		140	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*149*	*S1+*	*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: MB 880-68410/1-A
Matrix: Solid
Analysis Batch: 68448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68410

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		12/05/23 12:25	12/06/23 07:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 07:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/05/23 12:25	12/06/23 07:48	1

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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

Lab Sample ID: MB 880-68410/1-A
Matrix: Solid
Analysis Batch: 68448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68410

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	185	S1+	70 - 130	12/05/23 12:25	12/06/23 07:48	1
o-Terphenyl	165	S1+	70 - 130	12/05/23 12:25	12/06/23 07:48	1

Lab Sample ID: LCS 880-68410/2-A
Matrix: Solid
Analysis Batch: 68448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68410

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	965.5		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	994.5		mg/Kg		99	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	115		70 - 130

Lab Sample ID: LCSD 880-68410/3-A
Matrix: Solid
Analysis Batch: 68448

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68410

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	982.3		mg/Kg		98	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1007		mg/Kg		101	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 890-5712-4 MS
Matrix: Solid
Analysis Batch: 68448

Client Sample ID: FS 09
Prep Type: Total/NA
Prep Batch: 68410

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	927.1		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	1269		mg/Kg		121	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	142	S1+	70 - 130
o-Terphenyl	96		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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

Lab Sample ID: 890-5712-4 MSD — **Client Sample ID: FS 09**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 68448 — **Prep Batch: 68410**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	960.4		mg/Kg		95	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	1298		mg/Kg		124	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*143*	*S1+*	*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: MB 880-68547/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 68559 — **Prep Batch: 68547**

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		12/06/23 17:12	12/07/23 07:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/06/23 17:12	12/07/23 07:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/06/23 17:12	12/07/23 07:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*12/06/23 17:12*	*12/07/23 07:53*	*1*
o-Terphenyl	*153*	*S1+*	*70 - 130*	*12/06/23 17:12*	*12/07/23 07:53*	*1*

Lab Sample ID: LCS 880-68547/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 68559 — **Prep Batch: 68547**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	885.4		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	946.0		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: LCSD 880-68547/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 68559 — **Prep Batch: 68547**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	844.5		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	820.6		mg/Kg		82	70 - 130	14	20

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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

Lab Sample ID: LCSD 880-68547/3-A
Matrix: Solid
Analysis Batch: 68559

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68547

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-5712-24 MS
Matrix: Solid
Analysis Batch: 68559

Client Sample ID: FS 05
Prep Type: Total/NA
Prep Batch: 68547

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	866.0		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	887.3		mg/Kg		88	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 890-5712-24 MSD
Matrix: Solid
Analysis Batch: 68559

Client Sample ID: FS 05
Prep Type: Total/NA
Prep Batch: 68547

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	788.8		mg/Kg		78	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<50.1	U	1010	861.9		mg/Kg		85	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68405/1-A
Matrix: Solid
Analysis Batch: 68428

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			12/05/23 19:50	1

Lab Sample ID: LCS 880-68405/2-A
Matrix: Solid
Analysis Batch: 68428

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	257.5		mg/Kg		103	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-68405/3-A
Matrix: Solid
Analysis Batch: 68428

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	255.9		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-5711-A-1-B MS
Matrix: Solid
Analysis Batch: 68428

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	53.3	F1 F2	2750	3395	F1	mg/Kg		122	90 - 110		

Lab Sample ID: 890-5711-A-1-C MSD
Matrix: Solid
Analysis Batch: 68428

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	53.3	F1 F2	250	304.4	F2	mg/Kg		100	90 - 110	167	20

Lab Sample ID: 890-5714-A-3-B MS
Matrix: Solid
Analysis Batch: 68428

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	21.6		248	271.7		mg/Kg		101	90 - 110		

Lab Sample ID: 890-5714-A-3-C MSD
Matrix: Solid
Analysis Batch: 68428

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	21.6		248	279.4		mg/Kg		104	90 - 110	3	20

Lab Sample ID: MB 880-68406/1-A
Matrix: Solid
Analysis Batch: 68442

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			12/05/23 17:26	1

Lab Sample ID: LCS 880-68406/2-A
Matrix: Solid
Analysis Batch: 68442

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	254.1		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-68406/3-A
Matrix: Solid
Analysis Batch: 68442

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	251.9		mg/Kg		101	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-5712-1 MS
Matrix: Solid
Analysis Batch: 68442

Client Sample ID: FS 03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	771		2480	3142		mg/Kg		96	90 - 110

Lab Sample ID: 890-5712-1 MSD
Matrix: Solid
Analysis Batch: 68442

Client Sample ID: FS 03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	771		2480	3161		mg/Kg		97	90 - 110	1	20

Lab Sample ID: 890-5712-11 MS
Matrix: Solid
Analysis Batch: 68442

Client Sample ID: FS 10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	75.5		249	311.7		mg/Kg		95	90 - 110

Lab Sample ID: 890-5712-11 MSD
Matrix: Solid
Analysis Batch: 68442

Client Sample ID: FS 10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	75.5		249	313.1		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

GC VOA

Prep Batch: 68391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-21	SW 06	Total/NA	Solid	5035	
890-5712-22	FS 21	Total/NA	Solid	5035	
890-5712-23	FS 22	Total/NA	Solid	5035	
890-5712-24	FS 05	Total/NA	Solid	5035	
890-5712-25	FS 08	Total/NA	Solid	5035	
890-5712-26	SW 01	Total/NA	Solid	5035	
MB 880-68391/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-68391/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-68391/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-36564-A-41-J MS	Matrix Spike	Total/NA	Solid	5035	
880-36564-A-41-K MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 68401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Total/NA	Solid	5035	
890-5712-2	FS 04	Total/NA	Solid	5035	
890-5712-3	FS 07	Total/NA	Solid	5035	
890-5712-4	FS 09	Total/NA	Solid	5035	
890-5712-5	SW 04	Total/NA	Solid	5035	
890-5712-6	FS 06	Total/NA	Solid	5035	
890-5712-7	FS 15	Total/NA	Solid	5035	
890-5712-8	FS 16	Total/NA	Solid	5035	
890-5712-9	SW 02	Total/NA	Solid	5035	
890-5712-10	SW 03	Total/NA	Solid	5035	
890-5712-11	FS 10	Total/NA	Solid	5035	
890-5712-12	FS 11	Total/NA	Solid	5035	
890-5712-13	FS 12	Total/NA	Solid	5035	
890-5712-14	FS 13	Total/NA	Solid	5035	
890-5712-15	FS 14	Total/NA	Solid	5035	
890-5712-16	FS 17	Total/NA	Solid	5035	
890-5712-17	FS 18	Total/NA	Solid	5035	
890-5712-18	FS 19	Total/NA	Solid	5035	
890-5712-19	FS 20	Total/NA	Solid	5035	
890-5712-20	SW 05	Total/NA	Solid	5035	
MB 880-68401/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-68401/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-68401/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5712-1 MS	FS 03	Total/NA	Solid	5035	
890-5712-1 MSD	FS 03	Total/NA	Solid	5035	

Analysis Batch: 68485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Total/NA	Solid	Total BTEX	
890-5712-2	FS 04	Total/NA	Solid	Total BTEX	
890-5712-3	FS 07	Total/NA	Solid	Total BTEX	
890-5712-4	FS 09	Total/NA	Solid	Total BTEX	
890-5712-5	SW 04	Total/NA	Solid	Total BTEX	
890-5712-6	FS 06	Total/NA	Solid	Total BTEX	
890-5712-7	FS 15	Total/NA	Solid	Total BTEX	
890-5712-8	FS 16	Total/NA	Solid	Total BTEX	
890-5712-9	SW 02	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

GC VOA (Continued)

Analysis Batch: 68485 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-10	SW 03	Total/NA	Solid	Total BTEX	
890-5712-11	FS 10	Total/NA	Solid	Total BTEX	
890-5712-12	FS 11	Total/NA	Solid	Total BTEX	
890-5712-13	FS 12	Total/NA	Solid	Total BTEX	
890-5712-14	FS 13	Total/NA	Solid	Total BTEX	
890-5712-15	FS 14	Total/NA	Solid	Total BTEX	
890-5712-16	FS 17	Total/NA	Solid	Total BTEX	
890-5712-17	FS 18	Total/NA	Solid	Total BTEX	
890-5712-18	FS 19	Total/NA	Solid	Total BTEX	
890-5712-19	FS 20	Total/NA	Solid	Total BTEX	
890-5712-20	SW 05	Total/NA	Solid	Total BTEX	
890-5712-21	SW 06	Total/NA	Solid	Total BTEX	
890-5712-22	FS 21	Total/NA	Solid	Total BTEX	
890-5712-23	FS 22	Total/NA	Solid	Total BTEX	
890-5712-24	FS 05	Total/NA	Solid	Total BTEX	
890-5712-25	FS 08	Total/NA	Solid	Total BTEX	
890-5712-26	SW 01	Total/NA	Solid	Total BTEX	

Analysis Batch: 68650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Total/NA	Solid	8021B	68401
890-5712-2	FS 04	Total/NA	Solid	8021B	68401
890-5712-3	FS 07	Total/NA	Solid	8021B	68401
890-5712-4	FS 09	Total/NA	Solid	8021B	68401
890-5712-5	SW 04	Total/NA	Solid	8021B	68401
890-5712-6	FS 06	Total/NA	Solid	8021B	68401
890-5712-7	FS 15	Total/NA	Solid	8021B	68401
890-5712-8	FS 16	Total/NA	Solid	8021B	68401
890-5712-9	SW 02	Total/NA	Solid	8021B	68401
890-5712-10	SW 03	Total/NA	Solid	8021B	68401
890-5712-11	FS 10	Total/NA	Solid	8021B	68401
890-5712-12	FS 11	Total/NA	Solid	8021B	68401
890-5712-13	FS 12	Total/NA	Solid	8021B	68401
890-5712-14	FS 13	Total/NA	Solid	8021B	68401
890-5712-15	FS 14	Total/NA	Solid	8021B	68401
890-5712-16	FS 17	Total/NA	Solid	8021B	68401
890-5712-17	FS 18	Total/NA	Solid	8021B	68401
890-5712-18	FS 19	Total/NA	Solid	8021B	68401
890-5712-19	FS 20	Total/NA	Solid	8021B	68401
890-5712-20	SW 05	Total/NA	Solid	8021B	68401
MB 880-68401/5-B	Method Blank	Total/NA	Solid	8021B	68401
MB 880-68650/39	Method Blank	Total/NA	Solid	8021B	
LCS 880-68401/1-A	Lab Control Sample	Total/NA	Solid	8021B	68401
LCSD 880-68401/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	68401
890-5712-1 MS	FS 03	Total/NA	Solid	8021B	68401
890-5712-1 MSD	FS 03	Total/NA	Solid	8021B	68401

Analysis Batch: 68741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-21	SW 06	Total/NA	Solid	8021B	68391
890-5712-22	FS 21	Total/NA	Solid	8021B	68391

QC Association Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

GC VOA (Continued)

Analysis Batch: 68741 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-23	FS 22	Total/NA	Solid	8021B	68391
890-5712-24	FS 05	Total/NA	Solid	8021B	68391
890-5712-25	FS 08	Total/NA	Solid	8021B	68391
890-5712-26	SW 01	Total/NA	Solid	8021B	68391
MB 880-68391/5-A	Method Blank	Total/NA	Solid	8021B	68391
LCS 880-68391/1-A	Lab Control Sample	Total/NA	Solid	8021B	68391
LCSD 880-68391/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	68391
880-36564-A-41-J MS	Matrix Spike	Total/NA	Solid	8021B	68391
880-36564-A-41-K MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	68391

GC Semi VOA

Analysis Batch: 68368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Total/NA	Solid	8015B NM	68386
890-5712-2	FS 04	Total/NA	Solid	8015B NM	68386
890-5712-3	FS 07	Total/NA	Solid	8015B NM	68386
MB 880-68386/1-A	Method Blank	Total/NA	Solid	8015B NM	68386
LCS 880-68386/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	68386
LCSD 880-68386/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	68386
880-36387-A-4-F MS	Matrix Spike	Total/NA	Solid	8015B NM	68386
880-36387-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	68386

Prep Batch: 68386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Total/NA	Solid	8015NM Prep	
890-5712-2	FS 04	Total/NA	Solid	8015NM Prep	
890-5712-3	FS 07	Total/NA	Solid	8015NM Prep	
MB 880-68386/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-68386/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-68386/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-36387-A-4-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-36387-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 68410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-4	FS 09	Total/NA	Solid	8015NM Prep	
890-5712-5	SW 04	Total/NA	Solid	8015NM Prep	
890-5712-6	FS 06	Total/NA	Solid	8015NM Prep	
890-5712-7	FS 15	Total/NA	Solid	8015NM Prep	
890-5712-8	FS 16	Total/NA	Solid	8015NM Prep	
890-5712-9	SW 02	Total/NA	Solid	8015NM Prep	
890-5712-10	SW 03	Total/NA	Solid	8015NM Prep	
890-5712-11	FS 10	Total/NA	Solid	8015NM Prep	
890-5712-12	FS 11	Total/NA	Solid	8015NM Prep	
890-5712-13	FS 12	Total/NA	Solid	8015NM Prep	
890-5712-14	FS 13	Total/NA	Solid	8015NM Prep	
890-5712-15	FS 14	Total/NA	Solid	8015NM Prep	
890-5712-16	FS 17	Total/NA	Solid	8015NM Prep	
890-5712-17	FS 18	Total/NA	Solid	8015NM Prep	
890-5712-18	FS 19	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

GC Semi VOA (Continued)

Prep Batch: 68410 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-19	FS 20	Total/NA	Solid	8015NM Prep	
890-5712-20	SW 05	Total/NA	Solid	8015NM Prep	
890-5712-21	SW 06	Total/NA	Solid	8015NM Prep	
890-5712-22	FS 21	Total/NA	Solid	8015NM Prep	
890-5712-23	FS 22	Total/NA	Solid	8015NM Prep	
MB 880-68410/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-68410/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-68410/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5712-4 MS	FS 09	Total/NA	Solid	8015NM Prep	
890-5712-4 MSD	FS 09	Total/NA	Solid	8015NM Prep	

Analysis Batch: 68448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-4	FS 09	Total/NA	Solid	8015B NM	68410
890-5712-5	SW 04	Total/NA	Solid	8015B NM	68410
890-5712-6	FS 06	Total/NA	Solid	8015B NM	68410
890-5712-7	FS 15	Total/NA	Solid	8015B NM	68410
890-5712-8	FS 16	Total/NA	Solid	8015B NM	68410
890-5712-9	SW 02	Total/NA	Solid	8015B NM	68410
890-5712-10	SW 03	Total/NA	Solid	8015B NM	68410
890-5712-11	FS 10	Total/NA	Solid	8015B NM	68410
890-5712-12	FS 11	Total/NA	Solid	8015B NM	68410
890-5712-13	FS 12	Total/NA	Solid	8015B NM	68410
890-5712-14	FS 13	Total/NA	Solid	8015B NM	68410
890-5712-15	FS 14	Total/NA	Solid	8015B NM	68410
890-5712-16	FS 17	Total/NA	Solid	8015B NM	68410
890-5712-17	FS 18	Total/NA	Solid	8015B NM	68410
890-5712-18	FS 19	Total/NA	Solid	8015B NM	68410
890-5712-19	FS 20	Total/NA	Solid	8015B NM	68410
890-5712-20	SW 05	Total/NA	Solid	8015B NM	68410
890-5712-21	SW 06	Total/NA	Solid	8015B NM	68410
890-5712-22	FS 21	Total/NA	Solid	8015B NM	68410
890-5712-23	FS 22	Total/NA	Solid	8015B NM	68410
MB 880-68410/1-A	Method Blank	Total/NA	Solid	8015B NM	68410
LCS 880-68410/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	68410
LCSD 880-68410/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	68410
890-5712-4 MS	FS 09	Total/NA	Solid	8015B NM	68410
890-5712-4 MSD	FS 09	Total/NA	Solid	8015B NM	68410

Analysis Batch: 68511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Total/NA	Solid	8015 NM	
890-5712-2	FS 04	Total/NA	Solid	8015 NM	
890-5712-3	FS 07	Total/NA	Solid	8015 NM	
890-5712-4	FS 09	Total/NA	Solid	8015 NM	
890-5712-5	SW 04	Total/NA	Solid	8015 NM	
890-5712-6	FS 06	Total/NA	Solid	8015 NM	
890-5712-7	FS 15	Total/NA	Solid	8015 NM	
890-5712-8	FS 16	Total/NA	Solid	8015 NM	
890-5712-9	SW 02	Total/NA	Solid	8015 NM	
890-5712-10	SW 03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

GC Semi VOA (Continued)

Analysis Batch: 68511 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-11	FS 10	Total/NA	Solid	8015 NM	
890-5712-12	FS 11	Total/NA	Solid	8015 NM	
890-5712-13	FS 12	Total/NA	Solid	8015 NM	
890-5712-14	FS 13	Total/NA	Solid	8015 NM	
890-5712-15	FS 14	Total/NA	Solid	8015 NM	
890-5712-16	FS 17	Total/NA	Solid	8015 NM	
890-5712-17	FS 18	Total/NA	Solid	8015 NM	
890-5712-18	FS 19	Total/NA	Solid	8015 NM	
890-5712-19	FS 20	Total/NA	Solid	8015 NM	
890-5712-20	SW 05	Total/NA	Solid	8015 NM	
890-5712-21	SW 06	Total/NA	Solid	8015 NM	
890-5712-22	FS 21	Total/NA	Solid	8015 NM	
890-5712-23	FS 22	Total/NA	Solid	8015 NM	
890-5712-24	FS 05	Total/NA	Solid	8015 NM	
890-5712-25	FS 08	Total/NA	Solid	8015 NM	
890-5712-26	SW 01	Total/NA	Solid	8015 NM	

Prep Batch: 68547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-24	FS 05	Total/NA	Solid	8015NM Prep	
890-5712-25	FS 08	Total/NA	Solid	8015NM Prep	
890-5712-26	SW 01	Total/NA	Solid	8015NM Prep	
MB 880-68547/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-68547/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-68547/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5712-24 MS	FS 05	Total/NA	Solid	8015NM Prep	
890-5712-24 MSD	FS 05	Total/NA	Solid	8015NM Prep	

Analysis Batch: 68559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-24	FS 05	Total/NA	Solid	8015B NM	68547
890-5712-25	FS 08	Total/NA	Solid	8015B NM	68547
890-5712-26	SW 01	Total/NA	Solid	8015B NM	68547
MB 880-68547/1-A	Method Blank	Total/NA	Solid	8015B NM	68547
LCS 880-68547/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	68547
LCSD 880-68547/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	68547
890-5712-24 MS	FS 05	Total/NA	Solid	8015B NM	68547
890-5712-24 MSD	FS 05	Total/NA	Solid	8015B NM	68547

HPLC/IC

Leach Batch: 68405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-21	SW 06	Soluble	Solid	DI Leach	
890-5712-22	FS 21	Soluble	Solid	DI Leach	
890-5712-23	FS 22	Soluble	Solid	DI Leach	
890-5712-24	FS 05	Soluble	Solid	DI Leach	
890-5712-25	FS 08	Soluble	Solid	DI Leach	
890-5712-26	SW 01	Soluble	Solid	DI Leach	
MB 880-68405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-68405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

HPLC/IC (Continued)

Leach Batch: 68405 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-68405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5711-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5711-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-5714-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5714-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 68406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Soluble	Solid	DI Leach	
890-5712-2	FS 04	Soluble	Solid	DI Leach	
890-5712-3	FS 07	Soluble	Solid	DI Leach	
890-5712-4	FS 09	Soluble	Solid	DI Leach	
890-5712-5	SW 04	Soluble	Solid	DI Leach	
890-5712-6	FS 06	Soluble	Solid	DI Leach	
890-5712-7	FS 15	Soluble	Solid	DI Leach	
890-5712-8	FS 16	Soluble	Solid	DI Leach	
890-5712-9	SW 02	Soluble	Solid	DI Leach	
890-5712-10	SW 03	Soluble	Solid	DI Leach	
890-5712-11	FS 10	Soluble	Solid	DI Leach	
890-5712-12	FS 11	Soluble	Solid	DI Leach	
890-5712-13	FS 12	Soluble	Solid	DI Leach	
890-5712-14	FS 13	Soluble	Solid	DI Leach	
890-5712-15	FS 14	Soluble	Solid	DI Leach	
890-5712-16	FS 17	Soluble	Solid	DI Leach	
890-5712-17	FS 18	Soluble	Solid	DI Leach	
890-5712-18	FS 19	Soluble	Solid	DI Leach	
890-5712-19	FS 20	Soluble	Solid	DI Leach	
890-5712-20	SW 05	Soluble	Solid	DI Leach	
MB 880-68406/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-68406/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-68406/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5712-1 MS	FS 03	Soluble	Solid	DI Leach	
890-5712-1 MSD	FS 03	Soluble	Solid	DI Leach	
890-5712-11 MS	FS 10	Soluble	Solid	DI Leach	
890-5712-11 MSD	FS 10	Soluble	Solid	DI Leach	

Analysis Batch: 68428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-21	SW 06	Soluble	Solid	300.0	68405
890-5712-22	FS 21	Soluble	Solid	300.0	68405
890-5712-23	FS 22	Soluble	Solid	300.0	68405
890-5712-24	FS 05	Soluble	Solid	300.0	68405
890-5712-25	FS 08	Soluble	Solid	300.0	68405
890-5712-26	SW 01	Soluble	Solid	300.0	68405
MB 880-68405/1-A	Method Blank	Soluble	Solid	300.0	68405
LCS 880-68405/2-A	Lab Control Sample	Soluble	Solid	300.0	68405
LCSD 880-68405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	68405
890-5711-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	68405
890-5711-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	68405
890-5714-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	68405
890-5714-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	68405

QC Association Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

HPLC/IC

Analysis Batch: 68442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5712-1	FS 03	Soluble	Solid	300.0	68406
890-5712-2	FS 04	Soluble	Solid	300.0	68406
890-5712-3	FS 07	Soluble	Solid	300.0	68406
890-5712-4	FS 09	Soluble	Solid	300.0	68406
890-5712-5	SW 04	Soluble	Solid	300.0	68406
890-5712-6	FS 06	Soluble	Solid	300.0	68406
890-5712-7	FS 15	Soluble	Solid	300.0	68406
890-5712-8	FS 16	Soluble	Solid	300.0	68406
890-5712-9	SW 02	Soluble	Solid	300.0	68406
890-5712-10	SW 03	Soluble	Solid	300.0	68406
890-5712-11	FS 10	Soluble	Solid	300.0	68406
890-5712-12	FS 11	Soluble	Solid	300.0	68406
890-5712-13	FS 12	Soluble	Solid	300.0	68406
890-5712-14	FS 13	Soluble	Solid	300.0	68406
890-5712-15	FS 14	Soluble	Solid	300.0	68406
890-5712-16	FS 17	Soluble	Solid	300.0	68406
890-5712-17	FS 18	Soluble	Solid	300.0	68406
890-5712-18	FS 19	Soluble	Solid	300.0	68406
890-5712-19	FS 20	Soluble	Solid	300.0	68406
890-5712-20	SW 05	Soluble	Solid	300.0	68406
MB 880-68406/1-A	Method Blank	Soluble	Solid	300.0	68406
LCS 880-68406/2-A	Lab Control Sample	Soluble	Solid	300.0	68406
LCSD 880-68406/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	68406
890-5712-1 MS	FS 03	Soluble	Solid	300.0	68406
890-5712-1 MSD	FS 03	Soluble	Solid	300.0	68406
890-5712-11 MS	FS 10	Soluble	Solid	300.0	68406
890-5712-11 MSD	FS 10	Soluble	Solid	300.0	68406

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 03

Lab Sample ID: 890-5712-1
Matrix: Solid
Date Collected: 11/27/23 10:30
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 19:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 19:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/05/23 17:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	68386	12/05/23 12:10	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68368	12/05/23 17:47	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		10			68442	12/05/23 17:46	CH	EET MID

Client Sample ID: FS 04

Lab Sample ID: 890-5712-2
Matrix: Solid
Date Collected: 11/27/23 10:35
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 20:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 20:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/05/23 18:09	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	68386	12/05/23 12:10	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68368	12/05/23 18:09	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		5			68442	12/05/23 18:05	CH	EET MID

Client Sample ID: FS 07

Lab Sample ID: 890-5712-3
Matrix: Solid
Date Collected: 11/27/23 13:50
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 20:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 20:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/05/23 18:30	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	68386	12/05/23 12:10	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68368	12/05/23 18:30	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 18:12	CH	EET MID

Client Sample ID: FS 09

Lab Sample ID: 890-5712-4
Matrix: Solid
Date Collected: 11/27/23 13:55
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 21:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 21:07	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 09

Lab Sample ID: 890-5712-4
Matrix: Solid
Date Collected: 11/27/23 13:55
Date Received: 12/04/23 08:17

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			68511	12/06/23 12:21	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 12:21	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 18:18	CH	EET MID

Client Sample ID: SW 04

Lab Sample ID: 890-5712-5
Matrix: Solid
Date Collected: 11/28/23 10:20
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 21:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 21:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 13:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 13:26	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 18:25	CH	EET MID

Client Sample ID: FS 06

Lab Sample ID: 890-5712-6
Matrix: Solid
Date Collected: 11/28/23 10:25
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 22:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 22:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 13:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 13:47	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 18:45	CH	EET MID

Client Sample ID: FS 15

Lab Sample ID: 890-5712-7
Matrix: Solid
Date Collected: 11/28/23 10:30
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 22:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 22:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 14:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 14:09	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 15

Lab Sample ID: 890-5712-7

Date Collected: 11/28/23 10:30
Matrix: Solid
Date Received: 12/04/23 08:17

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 18:51	CH	EET MID

Client Sample ID: FS 16

Lab Sample ID: 890-5712-8

Date Collected: 11/28/23 10:35
Matrix: Solid
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 22:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 22:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 14:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 14:31	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 18:58	CH	EET MID

Client Sample ID: SW 02

Lab Sample ID: 890-5712-9

Date Collected: 11/29/23 10:15
Matrix: Solid
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 23:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 23:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 14:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 14:53	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 19:04	CH	EET MID

Client Sample ID: SW 03

Lab Sample ID: 890-5712-10

Date Collected: 11/29/23 10:30
Matrix: Solid
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/09/23 23:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/09/23 23:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 15:15	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 15:15	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 19:11	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 10

Lab Sample ID: 890-5712-11
Matrix: Solid
Date Collected: 12/01/23 09:00
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 01:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 01:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 15:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 15:37	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 19:17	CH	EET MID

Client Sample ID: FS 11

Lab Sample ID: 890-5712-12
Matrix: Solid
Date Collected: 12/01/23 09:05
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 01:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 01:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 15:59	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 15:59	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 19:37	CH	EET MID

Client Sample ID: FS 12

Lab Sample ID: 890-5712-13
Matrix: Solid
Date Collected: 12/01/23 09:10
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 02:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 02:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 16:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 16:21	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 19:43	CH	EET MID

Client Sample ID: FS 13

Lab Sample ID: 890-5712-14
Matrix: Solid
Date Collected: 12/01/23 09:15
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 02:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 02:42	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 13

Lab Sample ID: 890-5712-14
Matrix: Solid
Date Collected: 12/01/23 09:15
Date Received: 12/04/23 08:17

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			68511	12/06/23 17:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 17:06	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 20:03	CH	EET MID

Client Sample ID: FS 14

Lab Sample ID: 890-5712-15
Matrix: Solid
Date Collected: 12/01/23 09:20
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 03:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 03:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 17:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 17:28	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		1			68442	12/05/23 20:10	CH	EET MID

Client Sample ID: FS 17

Lab Sample ID: 890-5712-16
Matrix: Solid
Date Collected: 12/01/23 09:25
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 03:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 03:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 17:49	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 17:49	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		5			68442	12/05/23 20:16	CH	EET MID

Client Sample ID: FS 18

Lab Sample ID: 890-5712-17
Matrix: Solid
Date Collected: 12/01/23 09:30
Date Received: 12/04/23 08:17

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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 03:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 03:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 18:10	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 18:10	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 18
Date Collected: 12/01/23 09:30
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		5			68442	12/05/23 20:23	CH	EET MID

Client Sample ID: FS 19
Date Collected: 12/01/23 09:35
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-18
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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 04:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 04:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 18:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 18:31	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		5			68442	12/05/23 20:29	CH	EET MID

Client Sample ID: FS 20
Date Collected: 12/01/23 09:40
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-19
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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 04:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 04:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 18:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 18:54	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		10			68442	12/05/23 20:36	CH	EET MID

Client Sample ID: SW 05
Date Collected: 12/01/23 11:45
Date Received: 12/04/23 08:17

Lab Sample ID: 890-5712-20
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	68401	12/05/23 10:27	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68650	12/10/23 05:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 05:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 19:15	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 19:15	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	68406	12/05/23 11:16	SMC	EET MID
Soluble	Analysis	300.0		5			68442	12/05/23 20:42	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: SW 06

Lab Sample ID: 890-5712-21

Date Collected: 12/01/23 14:25
Matrix: Solid
Date Received: 12/04/23 08:17

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	68391	12/05/23 12:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68741	12/10/23 00:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 00:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 19:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 19:37	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	68405	12/05/23 11:13	SMC	EET MID
Soluble	Analysis	300.0		5			68428	12/05/23 20:29	CH	EET MID

Client Sample ID: FS 21

Lab Sample ID: 890-5712-22

Date Collected: 12/01/23 14:55
Matrix: Solid
Date Received: 12/04/23 08:17

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	68391	12/05/23 12:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68741	12/10/23 00:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 00:29	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 19:59	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 19:59	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	68405	12/05/23 11:13	SMC	EET MID
Soluble	Analysis	300.0		5			68428	12/05/23 20:35	CH	EET MID

Client Sample ID: FS 22

Lab Sample ID: 890-5712-23

Date Collected: 12/01/23 15:00
Matrix: Solid
Date Received: 12/04/23 08:17

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	68391	12/05/23 12:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68741	12/10/23 00:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 00:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/06/23 20:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	68410	12/05/23 12:25	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68448	12/06/23 20:21	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	68405	12/05/23 11:13	SMC	EET MID
Soluble	Analysis	300.0		1			68428	12/05/23 20:41	CH	EET MID

Client Sample ID: FS 05

Lab Sample ID: 890-5712-24

Date Collected: 12/01/23 15:15
Matrix: Solid
Date Received: 12/04/23 08:17

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	68391	12/05/23 12:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68741	12/10/23 01:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 01:09	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Client Sample ID: FS 05

Lab Sample ID: 890-5712-24
Matrix: Solid
Date Collected: 12/01/23 15:15
Date Received: 12/04/23 08:17

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			68511	12/07/23 10:24	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	68547	12/06/23 17:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68559	12/07/23 10:24	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	68405	12/05/23 11:13	SMC	EET MID
Soluble	Analysis	300.0		5			68428	12/05/23 20:58	CH	EET MID

Client Sample ID: FS 08

Lab Sample ID: 890-5712-25
Matrix: Solid
Date Collected: 12/01/23 15:20
Date Received: 12/04/23 08:17

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	68391	12/05/23 12:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68741	12/10/23 01:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 01:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/07/23 11:29	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	68547	12/06/23 17:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68559	12/07/23 11:29	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	68405	12/05/23 11:13	SMC	EET MID
Soluble	Analysis	300.0		5			68428	12/05/23 21:03	CH	EET MID

Client Sample ID: SW 01

Lab Sample ID: 890-5712-26
Matrix: Solid
Date Collected: 12/01/23 15:10
Date Received: 12/04/23 08:17

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	68391	12/05/23 12:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68741	12/10/23 01:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68485	12/10/23 01:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			68511	12/07/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	68547	12/06/23 17:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68559	12/07/23 11:51	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	68405	12/05/23 11:13	SMC	EET MID
Soluble	Analysis	300.0		1			68428	12/05/23 21:09	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 PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: PLU PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

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 PC17 Fed SW 0001

Job ID: 890-5712-1
SDG: 03C1558087

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-5712-1	FS 03	Solid	11/27/23 10:30	12/04/23 08:17
890-5712-2	FS 04	Solid	11/27/23 10:35	12/04/23 08:17
890-5712-3	FS 07	Solid	11/27/23 13:50	12/04/23 08:17
890-5712-4	FS 09	Solid	11/27/23 13:55	12/04/23 08:17
890-5712-5	SW 04	Solid	11/28/23 10:20	12/04/23 08:17
890-5712-6	FS 06	Solid	11/28/23 10:25	12/04/23 08:17
890-5712-7	FS 15	Solid	11/28/23 10:30	12/04/23 08:17
890-5712-8	FS 16	Solid	11/28/23 10:35	12/04/23 08:17
890-5712-9	SW 02	Solid	11/29/23 10:15	12/04/23 08:17
890-5712-10	SW 03	Solid	11/29/23 10:30	12/04/23 08:17
890-5712-11	FS 10	Solid	12/01/23 09:00	12/04/23 08:17
890-5712-12	FS 11	Solid	12/01/23 09:05	12/04/23 08:17
890-5712-13	FS 12	Solid	12/01/23 09:10	12/04/23 08:17
890-5712-14	FS 13	Solid	12/01/23 09:15	12/04/23 08:17
890-5712-15	FS 14	Solid	12/01/23 09:20	12/04/23 08:17
890-5712-16	FS 17	Solid	12/01/23 09:25	12/04/23 08:17
890-5712-17	FS 18	Solid	12/01/23 09:30	12/04/23 08:17
890-5712-18	FS 19	Solid	12/01/23 09:35	12/04/23 08:17
890-5712-19	FS 20	Solid	12/01/23 09:40	12/04/23 08:17
890-5712-20	SW 05	Solid	12/01/23 11:45	12/04/23 08:17
890-5712-21	SW 06	Solid	12/01/23 14:25	12/04/23 08:17
890-5712-22	FS 21	Solid	12/01/23 14:55	12/04/23 08:17
890-5712-23	FS 22	Solid	12/01/23 15:00	12/04/23 08:17
890-5712-24	FS 05	Solid	12/01/23 15:15	12/04/23 08:17
890-5712-25	FS 08	Solid	12/01/23 15:20	12/04/23 08:17
890-5712-26	SW 01	Solid	12/01/23 15:10	12/04/23 08:17

Chain of Custody

eurofins | Environment Testing Xenco

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 3

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	Carlsbad, NM, 88220
Phone:	989-354-0852	Email:	BBelill@ensolum.com

Work Order Comments

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

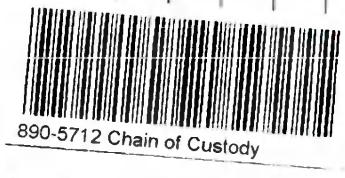
Project Name:	PLU PC 17 Fed SWD 001	Turn Around	
Project Number:	03C1556087	☒ Routine ☐ Rush	
Project Location:	32.126085, -103.901286	Due Date:	
Sampler's Name:	Graham Young	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	tNM607	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.0	
Total Containers:		Corrected Temperature:	0.8	

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	Parameters: Cl	BTEX	TPH
FS 03	S	11/27/23	10:30	2ft	C	1		X	X	X
FS 04		11/27/23	10:35	2ft						
FS 07		11/27/23	13:50	3ft						
FS 09		11/27/23	13:55	3ft						
SW 04		11/28/23	10:20	0-3ft						
FS 06		11/28/23	10:25	3ft						
FS 15		11/28/23	10:30	3ft						
FS 16		11/28/23	10:35	3ft						
SW 02		11/29/23	10:15	0-1ft						
SW 03		11/29/23	10:30	0-1ft						



Sample Comments

Incident #
nAPP2216639215
cost center
1090741001

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Meaks	12/4/23 0750	2 Meaks		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Chain of Custody

eurofins | Environment Testing Xenco

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 2 of 3

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	Carlsbad, NM, 88220
Phone:	989-854-0652	Email:	BBelill@ensolum.com

Work Order Comments

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

Project Name:	PLPC 17 Fed SWD 001	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558087		
Project Location:	32.126085, -103.904208	Due Date:	
Sampler's Name:	Sarah Nelwang	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:		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

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	Parameters: Cl-	BTEX	TPH	Sample Comments
FS10	S	12/01/23	9:00	4ft	C	1		X	X	X	Incident # nAPP2216839215
FS 11			9:05								Cost Center 1001074001
FS 12			9:10								
FS 13			9:15								
FS 14			9:20								
FS 17			9:25								
FS 16			9:30								
FS 19			9:35								
FS 20			9:40								
SW05			11:45	0-4ft							

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Mears	12/4/23 0750	2	Mears	
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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 3 of 3

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	Carlsbad, NM, 88220
Phone:	989-854-0852	Email:	BBelill@ensolum.com

Work Order Comments

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

Project Name:	PLU PC 17 Fed 2001	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558087	Due Date:	
Project Location:	32.126085, -103.10420	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Sarah Wellvang		
PO #:			

ANALYSIS REQUEST — Parameters: Cl, BTEX, TPH

Preservative Codes

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

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Cl	BTEX	TPH	Sample Comments
SW06	S	12/01/23	14:25	0-4ft	C	1	X	X	X	Incident #
FS 21	↓	↓	14:35	4ft	↓	↓	↓	↓	↓	nAPP2216839215
FS 22	↓	↓	15:00	4ft	↓	↓	↓	↓	↓	Cost center
FS05	↓	↓	15:15	4ft	↓	↓	↓	↓	↓	1090741001
FS06	↓	↓	15:20	4ft	↓	↓	↓	↓	↓	
SW01	↓	↓	15:10	0-4ft	↓	↓	↓	↓	↓	

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	12/4/23 0750	2 [signature]		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5712-1
SDG Number: 03C1558087

Login Number: 5712
List Number: 1
Creator: Lopez, Abraham

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: 890-5712-1
SDG Number: 03C1558087

Login Number: 5712
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/05/23 11:35 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 2/12/2024 9:50:22 AM

JOB DESCRIPTION

PLU PC 17 SWD 1
03C1558087

JOB NUMBER

890-6041-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

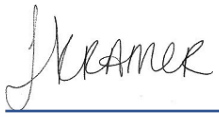
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
2/12/2024 9:50:22 AM

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

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Laboratory Job ID: 890-6041-1
SDG: 03C1558087

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
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 Job ID: 890-6041-1
Project: PLU PC 17 SWD 1

Job ID: 890-6041-1 Eurofins Carlsbad

Job Narrative
890-6041-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 1/26/2024 2:57 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 1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW 07 (890-6041-1), FS 03A (890-6041-2) and FS 04A (890-6041-3).

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: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 870-17905 and analytical batch 870-17969 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO).

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike duplicate recoveries are unavailable for preparation batch 870-17905 and analytical batch 870-17969. The associated laboratory control sample (LCS/LCSD) met acceptance criteria.

Method 8015MOD_NM: An incorrect volume of spiking solution was inadvertently added the following samples: (CCV 870-17969/164) and (CCV 870-17969/165). Percent recoveries are based on the amount spiked.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-6038-A-1-K MS) and (890-6038-A-1-L MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside the upper control limit: SW 07 (890-6041-1), FS 03A (890-6041-2), FS 04A (890-6041-3) and (890-6038-A-1-J). This sample did not contain any target analytes; 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 PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Client Sample ID: SW 07

Date Collected: 01/26/24 11:20
Date Received: 01/26/24 14:57
Sample Depth: 0 - 4'

Lab Sample ID: 890-6041-1
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		02/06/24 13:15	02/09/24 02:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/06/24 13:15	02/09/24 02:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/06/24 13:15	02/09/24 02:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/06/24 13:15	02/09/24 02:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/06/24 13:15	02/09/24 02:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/06/24 13:15	02/09/24 02:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*02/06/24 13:15*	*02/09/24 02:29*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*02/06/24 13:15*	*02/09/24 02:29*	*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			02/09/24 02:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			02/05/24 21:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.5	U *1	50.5		mg/Kg		01/30/24 11:32	02/05/24 21:56	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		01/30/24 11:32	02/05/24 21:56	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		01/30/24 11:32	02/05/24 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*01/30/24 11:32*	*02/05/24 21:56*	*1*
1-Chlorooctane	*125*		*70 - 130*	*01/30/24 11:32*	*02/05/24 21:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**142**		4.96		mg/Kg			02/03/24 15:52	1

Client Sample ID: FS 03A

Date Collected: 01/26/24 10:25
Date Received: 01/26/24 14:57
Sample Depth: 4'

Lab Sample ID: 890-6041-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/06/24 13:15	02/09/24 02:49	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/06/24 13:15	02/09/24 02:49	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/06/24 13:15	02/09/24 02:49	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		02/06/24 13:15	02/09/24 02:49	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/06/24 13:15	02/09/24 02:49	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		02/06/24 13:15	02/09/24 02:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/06/24 13:15*	*02/09/24 02:49*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*02/06/24 13:15*	*02/09/24 02:49*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Client Sample ID: FS 03A

Date Collected: 01/26/24 10:25
Date Received: 01/26/24 14:57
Sample Depth: 4'

Lab Sample ID: 890-6041-2
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			02/09/24 02:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			02/05/24 22:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.4	U *1	50.4		mg/Kg		01/30/24 11:32	02/05/24 22:17	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		01/30/24 11:32	02/05/24 22:17	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		01/30/24 11:32	02/05/24 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*01/30/24 11:32*	*02/05/24 22:17*	*1*
1-Chlorooctane	*123*		*70 - 130*	*01/30/24 11:32*	*02/05/24 22:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**111**		4.99		mg/Kg			02/03/24 16:12	1

Client Sample ID: FS 04A

Date Collected: 01/26/24 11:00
Date Received: 01/26/24 14:57
Sample Depth: 4'

Lab Sample ID: 890-6041-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/06/24 13:15	02/09/24 03:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/06/24 13:15	02/09/24 03:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/06/24 13:15	02/09/24 03:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/06/24 13:15	02/09/24 03:10	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/06/24 13:15	02/09/24 03:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/06/24 13:15	02/09/24 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/06/24 13:15*	*02/09/24 03:10*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*02/06/24 13:15*	*02/09/24 03:10*	*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			02/09/24 03:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			02/05/24 22:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.6	U *1	49.6		mg/Kg		01/30/24 11:32	02/05/24 22:37	1

Client Sample Results

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Client Sample ID: FS 04A

Date Collected: 01/26/24 11:00
Date Received: 01/26/24 14:57
Sample Depth: 4'

Lab Sample ID: 890-6041-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		01/30/24 11:32	02/05/24 22:37	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		01/30/24 11:32	02/05/24 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*167*	*S1+*	*70 - 130*	*01/30/24 11:32*	*02/05/24 22:37*	*1*
1-Chlorooctane	*148*	*S1+*	*70 - 130*	*01/30/24 11:32*	*02/05/24 22:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**98.7**		4.98		mg/Kg			02/03/24 16:19	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)										
890-6041-1	SW 07	92	100										
890-6041-1 MS	SW 07	112	102										
890-6041-1 MSD	SW 07	112	88										
890-6041-2	FS 03A	118	112										
890-6041-3	FS 04A	113	107										
LCS 880-72500/1-A	Lab Control Sample	113	96										
LCSD 880-72500/2-A	Lab Control Sample Dup	97	104										
MB 880-72500/5-A	Method Blank	118	118										
MB 880-72659/5-A	Method Blank	119	113										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	OTPH1 (70-130)	1CO1 (70-130)										
890-6038-A-1-K MS	Matrix Spike	139 S1+	127										
890-6038-A-1-L MSD	Matrix Spike Duplicate	146 S1+	128										
890-6041-1	SW 07	140 S1+	125										
890-6041-2	FS 03A	140 S1+	123										
890-6041-3	FS 04A	167 S1+	148 S1+										
LCS 870-17905/1-A	Lab Control Sample	125	108										
LCSD 870-17905/2-A	Lab Control Sample Dup	126	112										
MB 870-17905/3-A	Method Blank	128	122										

Surrogate Legend

OTPH = o-Terphenyl
1CO = 1-Chlorooctane

QC Sample Results

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72500/5-A
Matrix: Solid
Analysis Batch: 72586

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72500

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/06/24 13:15	02/09/24 02:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/06/24 13:15	02/09/24 02:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/06/24 13:15	02/09/24 02:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/06/24 13:15	02/09/24 02:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/06/24 13:15	02/09/24 02:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/06/24 13:15	02/09/24 02:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/06/24 13:15*	*02/09/24 02:00*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*02/06/24 13:15*	*02/09/24 02:00*	*1*

Lab Sample ID: LCS 880-72500/1-A
Matrix: Solid
Analysis Batch: 72586

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72500

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08736		mg/Kg		87	70 - 130		
Toluene			0.100	0.08524		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.1063		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2050		mg/Kg		103	70 - 130		
o-Xylene			0.100	0.1026		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-72500/2-A
Matrix: Solid
Analysis Batch: 72586

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72500

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09523		mg/Kg		95	70 - 130	9	35
Toluene			0.100	0.09338		mg/Kg		93	70 - 130	9	35
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1896		mg/Kg		95	70 - 130	8	35
o-Xylene			0.100	0.09424		mg/Kg		94	70 - 130	9	35

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

Lab Sample ID: 890-6041-1 MS
Matrix: Solid
Analysis Batch: 72586

Client Sample ID: SW 07
Prep Type: Total/NA
Prep Batch: 72500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.101	0.08996		mg/Kg		89	70 - 130		
Toluene	<0.00199	U	0.101	0.08962		mg/Kg		89	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

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

Lab Sample ID: 890-6041-1 MS — **Client Sample ID: SW 07**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72586 — **Prep Batch: 72500**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.1020		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1995		mg/Kg		99	70 - 130
o-Xylene	<0.00199	U	0.101	0.09814		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-6041-1 MSD — **Client Sample ID: SW 07**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72586 — **Prep Batch: 72500**

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	0.08024		mg/Kg		80	70 - 130	11	35
Toluene	<0.00199	U	0.100	0.09215		mg/Kg		92	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.100	0.1045		mg/Kg		104	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1995		mg/Kg		100	70 - 130	0	35
o-Xylene	<0.00199	U	0.100	0.09761		mg/Kg		97	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: MB 880-72659/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72586 — **Prep Batch: 72659**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/08/24 13:05	02/08/24 14:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/08/24 13:05	02/08/24 14:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/08/24 13:05	02/08/24 14:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/08/24 13:05	02/08/24 14:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/08/24 13:05	02/08/24 14:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/08/24 13:05	02/08/24 14:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/08/24 13:05*	*02/08/24 14:24*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*02/08/24 13:05*	*02/08/24 14:24*	*1*

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

Lab Sample ID: MB 870-17905/3-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 17969 — **Prep Batch: 17905**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		01/30/24 11:32	02/05/24 15:43	1

QC Sample Results

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

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

Lab Sample ID: MB 870-17905/3-A
Matrix: Solid
Analysis Batch: 17969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17905

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		01/30/24 11:32	02/05/24 15:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/30/24 11:32	02/05/24 15:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*128*		*70 - 130*	*01/30/24 11:32*	*02/05/24 15:43*	*1*
1-Chlorooctane	*122*		*70 - 130*	*01/30/24 11:32*	*02/05/24 15:43*	*1*

Lab Sample ID: LCS 870-17905/1-A
Matrix: Solid
Analysis Batch: 17969

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17905

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)			1020	1174		mg/Kg		115	70 - 130		
Diesel Range Organics (Over C10-C28)			1010	1217		mg/Kg		120	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*125*		*70 - 130*
1-Chlorooctane	*108*		*70 - 130*

Lab Sample ID: LCSD 870-17905/2-A
Matrix: Solid
Analysis Batch: 17969

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17905

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)			1020	906.0	*1	mg/Kg		89	70 - 130	26	20
Diesel Range Organics (Over C10-C28)			1010	1213		mg/Kg		120	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*126*		*70 - 130*
1-Chlorooctane	*112*		*70 - 130*

Lab Sample ID: 890-6038-A-1-K MS
Matrix: Solid
Analysis Batch: 17969

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 17905

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)	<49.9	U *1 F1	1020	1169		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)	55.5	F1 F2	1010	1263		mg/Kg		119	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*139*	*S1+*	*70 - 130*
1-Chlorooctane	*127*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

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

Lab Sample ID: 890-6038-A-1-L MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 17969 — **Prep Batch: 17905**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)	<49.9	U *1 F1	1020	<50.2	U F1	mg/Kg		0	70 - 130	NC	20
Diesel Range Organics (Over C10-C28)	55.5	F1 F2	1010	<50.2	U F1 F2	mg/Kg		-2	70 - 130	190	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*146*	*S1+*	*70 - 130*
1-Chlorooctane	*128*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71956/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72172

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/03/24 15:31	1

Lab Sample ID: LCS 880-71956/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72172

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	273.0		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-71956/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72172

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	266.7		mg/Kg		107	90 - 110	2	20

Lab Sample ID: 890-6041-1 MS — **Client Sample ID: SW 07**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72172

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	142		248	404.5		mg/Kg		106	90 - 110		

Lab Sample ID: 890-6041-1 MSD — **Client Sample ID: SW 07**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 72172

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	142		248	402.1		mg/Kg		105	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

GC VOA

Prep Batch: 72500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Total/NA	Solid	5035	
890-6041-2	FS 03A	Total/NA	Solid	5035	
890-6041-3	FS 04A	Total/NA	Solid	5035	
MB 880-72500/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72500/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72500/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6041-1 MS	SW 07	Total/NA	Solid	5035	
890-6041-1 MSD	SW 07	Total/NA	Solid	5035	

Analysis Batch: 72586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Total/NA	Solid	8021B	72500
890-6041-2	FS 03A	Total/NA	Solid	8021B	72500
890-6041-3	FS 04A	Total/NA	Solid	8021B	72500
MB 880-72500/5-A	Method Blank	Total/NA	Solid	8021B	72500
MB 880-72659/5-A	Method Blank	Total/NA	Solid	8021B	72659
LCS 880-72500/1-A	Lab Control Sample	Total/NA	Solid	8021B	72500
LCSD 880-72500/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72500
890-6041-1 MS	SW 07	Total/NA	Solid	8021B	72500
890-6041-1 MSD	SW 07	Total/NA	Solid	8021B	72500

Prep Batch: 72659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-72659/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 72718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Total/NA	Solid	Total BTEX	
890-6041-2	FS 03A	Total/NA	Solid	Total BTEX	
890-6041-3	FS 04A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Total/NA	Solid	8015NM Prep	
890-6041-2	FS 03A	Total/NA	Solid	8015NM Prep	
890-6041-3	FS 04A	Total/NA	Solid	8015NM Prep	
MB 870-17905/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17905/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17905/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6038-A-1-K MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6038-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Total/NA	Solid	8015B NM	17905
890-6041-2	FS 03A	Total/NA	Solid	8015B NM	17905
890-6041-3	FS 04A	Total/NA	Solid	8015B NM	17905
MB 870-17905/3-A	Method Blank	Total/NA	Solid	8015B NM	17905
LCS 870-17905/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17905

QC Association Summary

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

GC Semi VOA (Continued)

Analysis Batch: 17969 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 870-17905/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17905
890-6038-A-1-K MS	Matrix Spike	Total/NA	Solid	8015B NM	17905
890-6038-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17905

Analysis Batch: 17983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Total/NA	Solid	8015 NM	
890-6041-2	FS 03A	Total/NA	Solid	8015 NM	
890-6041-3	FS 04A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 71956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Soluble	Solid	DI Leach	
890-6041-2	FS 03A	Soluble	Solid	DI Leach	
890-6041-3	FS 04A	Soluble	Solid	DI Leach	
MB 880-71956/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71956/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71956/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6041-1 MS	SW 07	Soluble	Solid	DI Leach	
890-6041-1 MSD	SW 07	Soluble	Solid	DI Leach	

Analysis Batch: 72172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6041-1	SW 07	Soluble	Solid	300.0	71956
890-6041-2	FS 03A	Soluble	Solid	300.0	71956
890-6041-3	FS 04A	Soluble	Solid	300.0	71956
MB 880-71956/1-A	Method Blank	Soluble	Solid	300.0	71956
LCS 880-71956/2-A	Lab Control Sample	Soluble	Solid	300.0	71956
LCSD 880-71956/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71956
890-6041-1 MS	SW 07	Soluble	Solid	300.0	71956
890-6041-1 MSD	SW 07	Soluble	Solid	300.0	71956

Lab Chronicle

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Client Sample ID: SW 07

Lab Sample ID: 890-6041-1

Date Collected: 01/26/24 11:20
Matrix: Solid
Date Received: 01/26/24 14:57

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	72500	02/06/24 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72586	02/09/24 02:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72718	02/09/24 02:29	SM	EET MID
Total/NA	Analysis	8015 NM		1			17983	02/05/24 21:56	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	17905	01/30/24 11:32	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 21:56	WP	EET DAL
Soluble	Leach	DI Leach			5.04 g	50 mL	71956	01/30/24 14:18	SMC	EET MID
Soluble	Analysis	300.0		1			72172	02/03/24 15:52	CH	EET MID

Client Sample ID: FS 03A

Lab Sample ID: 890-6041-2

Date Collected: 01/26/24 10:25
Matrix: Solid
Date Received: 01/26/24 14:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	72500	02/06/24 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72586	02/09/24 02:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72718	02/09/24 02:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			17983	02/05/24 22:17	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	17905	01/30/24 11:32	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 22:17	WP	EET DAL
Soluble	Leach	DI Leach			5.01 g	50 mL	71956	01/30/24 14:18	SMC	EET MID
Soluble	Analysis	300.0		1			72172	02/03/24 16:12	CH	EET MID

Client Sample ID: FS 04A

Lab Sample ID: 890-6041-3

Date Collected: 01/26/24 11:00
Matrix: Solid
Date Received: 01/26/24 14:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	72500	02/06/24 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72586	02/09/24 03:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72718	02/09/24 03:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			17983	02/05/24 22:37	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	17905	01/30/24 11:32	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 22:37	WP	EET DAL
Soluble	Leach	DI Leach			5.02 g	50 mL	71956	01/30/24 14:18	SMC	EET MID
Soluble	Analysis	300.0		1			72172	02/03/24 16:19	CH	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Laboratory: Eurofins Dallas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704295-23-34	06-30-24

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

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 DAL
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET DAL
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 DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Sample Summary

Client: Ensolum
Project/Site: PLU PC 17 SWD 1

Job ID: 890-6041-1
SDG: 03C1558087

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6041-1	SW 07	Solid	01/26/24 11:20	01/26/24 14:57	0 - 4'
890-6041-2	FS 03A	Solid	01/26/24 10:25	01/26/24 14:57	4'
890-6041-3	FS 04A	Solid	01/26/24 11:00	01/26/24 14:57	4'

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

Wo

890-6041 Chain of Custody

6041

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	(989) 854-0852	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU PC 17 SWD 1	Turn Around	
Project Number:	03C1558087	☒ Routine ☐ Rush	
Project Location:	32.12593, -103.90690	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TM002
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	BTEX	TPH
SW07	S	1/26/24	11:20	0-4'	C	1	X	X	X
FS03A	S	1/26/24	10:25	4'	C	1	↓	↓	↓
FS04A	S	1/26/24	11:00	4'	C	1	↓	↓	↓

MO

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 #:
nAPP2216839215
Cost center:
1090741001
API: 30-015-43310
Ben Belill:
bbelill@ensolum.com

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	M. ODell		1/26 1457			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Phone: 432-704-5440

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 880-9107.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-6041-1
Address: 9701 Harry Hines Blvd, ,	Due Date Requested: 2/1/2024			
City: Dallas	TAT Requested (days):			
State, Zip: TX, 75220				
Phone: 214-902-0300(Tel)	PO #:			
Email:	WO #:			
Project Name: PLU PC 17 SWD 1	Project #: 89000093			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_Calc	8015MOD_NM/8015NM_S_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SW 07 (890-6041-1)	1/26/24	11:20 Mountain		Solid			X	X	1	
FS 03A (890-6041-2)	1/26/24	10:25 Mountain		Solid			X	X	1	
FS 04A (890-6041-3)	1/26/24	11:00 Mountain		Solid			X	X	1	

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

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

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by: FedEx	Date/Time:	Company
Relinquished by: FedEx	Date/Time: 2/3/24 1125	Company	Received by: MS	Date/Time: 2/3/24 1125	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Phone: 432-704-5440

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 880-9107.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-6041-1
Address: 9701 Harry Hines Blvd, ,	Due Date Requested: 2/1/2024			
City: Dallas	TAT Requested (days):			
State, Zip: TX, 75220				
Phone: 214-902-0300(Tel)	PO #:			
Email:	WO #:			
Project Name: PLU PC 17 SWD 1	Project #: 89000093			
Site:	SSOW#:			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_Calc	8015MOD_NM/8015NM_S_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
SW 07 (890-6041-1)	1/26/24	11:20 Mountain		Solid			X	X	1	
FS 03A (890-6041-2)	1/26/24	10:25 Mountain		Solid			X	X	1	
FS 04A (890-6041-3)	1/26/24	11:00 Mountain		Solid			X	X	1	

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

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

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: AJ Fedex	Date/Time: 2/02/24 17:00	Company	Received by: Fedex	Date/Time:	Company
Relinquished by: Fedex	Date/Time: 2/3/24 1125	Company	Received by: MS	Date/Time: 2/3/24 1125	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6041-1
SDG Number: 03C1558087

Login Number: 6041
List Number: 1
Creator: Bruns, Shannon

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: 890-6041-1
SDG Number: 03C1558087

Login Number: 6041
List Number: 3
Creator: Thompson, Christopher

List Source: Eurofins Dallas
List Creation: 02/03/24 01:45 PM

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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6041-1
SDG Number: 03C1558087

Login Number: 6041
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/30/24 10:34 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

Outlook

FW: XTO - Sampling Notification (Week of 11/27/23 - 12/1/23)

From Green, Garrett J <garrett.green@exxonmobil.com>
Date Wed 11/22/2023 11:11 AM
To Ben Belill <bbelill@ensolum.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Wes Weichert <wweichert@ensolum.com>

[**EXTERNAL EMAIL**]

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Wednesday, November 22, 2023 7:28 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; eco@slo.state.nm.us
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: XTO - Sampling Notification (Week of 11/27/23 - 12/1/23)

XTO plans to complete final sampling activities at the sites listed below for the week of November 27, 2023, between 8 a.m. and 5 p.m MST.

Thank you,

Site Name	PLU PC 17 SWD
Location	N-17-25S-30E; Eddy County, NM
Incident ID	nAPP2216839215
Source & Description of Activities	Soil Sampling
Expected Duration for Activities	3 Days (11.27.23-11.30.23)
Env Consultant	Ensolum
Contractor	Tex Mex
Sampling Notification Required	Yes
Surface Owner	BLM

Site Name	ADU 816
Location	A-5-21S-27E; Eddy County, NM
Incident ID	NAB1435334641
Source & Description of Activities	Groundwater Sampling
Expected Duration for Activities	2 Days (11.30.23-12.1.23)
Env Consultant	Ensolum

Contractor	NA
Sampling Notification Required	Yes
Surface Owner	BLM

Site Name	Nash Unit #046H
Location	C-18-23S-30E; Eddy County, NM
Incident ID	NAB1821139914
Source & Description of Activities	Soil Sampling
Expected Duration for Activities	2 Days (11.28.23-11.29.23)
Env Consultant	Ensolum
Contractor	Tex Mex
Sampling Notification Required	Yes
Surface Owner	SLO

Site Name	Remuda Basin 1
Location	J-24-23S-29E; Eddy County, NM
Incident ID	NAB1836137253
Source & Description of Activities	Soil Sampling
Expected Duration for Activities	5 Days (11.27.23-12.1.23)
Env Consultant	Ensolum
Contractor	Tex Mex
Sampling Notification Required	Yes
Surface Owner	SLO

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 E

NMOCD Notifications

From: Tacoma Morrissey
To: garrett.green@exxonmobil.com; Collins, Melanie
Cc: DelawareSpills@exxonmobil.com; Ashley Ager; Ben Belill; Kalei Jennings; Stuart Hyde
Subject: RE: XTO - Sampling Notification (Week of 8/22/22 - 8/26/22)
Date: Wednesday, August 17, 2022 4:48:00 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Hi Garrett,
Please see the below email for NMOCD sampling notification for the week of August 22, 2022.

All,

XTO plans to complete final sampling activities at the following sites the week of August 22, 2022.

Monday
- Corral Canyon Expansion/ NAPP2215951900

Tuesday
- Corral Canyon Expansion/ NAPP2215951900

Wednesday
- Corral Canyon Expansion/ NAPP2215951900
- PLU PC 17 SWD 1 / nAPP2216839215

Thursday
- PLU PC 17 SWD 1 / nAPP2216839215

Thank you,

Tacoma Morrissey
Senior Geologist
337-257-8307
Ensolum, LLC

ENSOLUM

APPENDIX B

Referenced Well Records

ENSOLUM

	Sample Name: BH01	Date: 8/08/2023
	Site Name: PLU PC 17 BATTERY	
	Incident Number: nAPP2233951574	
	Job Number: 03C1558215	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell/S. Welvang	Method: Air Rotary Rig
Coordinates: 32.123284, -103.897084	Hole Diameter: N/A	Total Depth: 110'

Comments: No field screening was conducted.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
						10	CCHE	0-10'. Caliche w/sand. Tan to light brown, very fine to fine grained, well graded, subrounded to subangular grains, dry.
						20	SW	10-20'. Sand. Reddish brown, very fine to fine grained, subrounded to subangular grains, well graded, trace CCHE, dry.
						30	SW	20-30'. Sand w/CCHE mixture. Very fine to fine grained, CCHE medium to coarse grains, sand reddish brown, tan to light brown CCHE Well graded.
						40	SC	30-50'. Clayey sand w/ gravel. Brown, very fine to fine grained, gravel small grained, trace CCHE, dry.
						50		
						60	SP	50-80'. Sand, brown (trace red), very fine to fine grained, poorly graded, subrounded to subangular, dry.
						70		
						80		80-90'. Sand. Yellowish tan, very fine to fine grained, poorly graded, trace silty, trace orange sand, trace CCHE, dry.
						90		90'-110'. Sand. Brownish red, very fine to fine grained, poorly graded, subrounded to subangular, dry.
						100		
						110		110': stopped drilling and set casing to 110'.

TD at 110' bgs.

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 749154
File Nbr: C 04758

Jul. 24, 2023

BENJAMIN BELILL
ENSOLUM, LLC
3122 NATIONAL PARKS HIGHWAY
CARLSBAD, NM 88220

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Vanessa Clements
(575)622-6521

Enclosure

explore

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 749154
File Nbr: C 04758

Jul. 24, 2023

GARRETT GREEN
XTO ENERGY, INC.
3401 E GREENE ST
CARLSBAD, NM 88220

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Vanessa Clements
(575)622-6521

Enclosure

explore

File No. C-4758

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well (Pump test)	☐ Construction Site/Public Works Dewatering	☐ Other(Describe):
☒ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: 7/17/2023 Requested End Date: TBD

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

1. APPLICANT(S)

Name: XTO Energy, Inc	Name: Ensolum, LLC
Contact or Agent: Garrett Green — check here if Agent ☐	Contact or Agent: Benjamin Belill — check here if Agent ☒
Mailing Address: 3401 E. Greene Street	Mailing Address: 3122 National Parks Highway
City: Carlsbad	City: Carlsbad
State: New Mexico Zip Code: 88220	State: New Mexico Zip Code: 88220
Phone: 575-200-0729 ☐ Home ☒ Cell Phone (Work):	Phone: 989-854-0852 ☐ Home ☒ Cell Phone (Work):
E-mail (optional): Garrett.Green@ExxonMobil.com	E-mail (optional): bbelill@ensolum.com

OSE DII JUL 7 2023 AM 11:30

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 11/17/16

File No.: C-4758	Trn. No.: 749154	Receipt No.: 245957
Trans Description (optional): MON		
Sub-Basin: CUB	PCW/LOG Due Date: 7-24-24	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
C-4758 Pod 1 BH01	-103.896478	32.123445	Unit P, S17, T25S, R30E, Eddy County

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:
Located on active well pad facility at the the Poker Lake Unit CVX JV RR #010H (32.123445,-103.896478).

Well is on land owned by: Federal - Bureau of Land Management

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ■ No
If yes, how many_____

Approximate depth of well (feet): 110	Outside diameter of well casing (inches): 2
Driller Name: Scarborough Drilling	Driller License Number: WD-1188

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

One soil boring to be advanced at the site to assess subsurface soil and regional groundwater depth. Temporary 2-inch inside diameter PVC well screen will be placed in open borehole to determine depth to water at the site. The borehole will be abandoned after 72 hours from the time the borehole is completed. The borehole location is depicted on the attached figure.

OSE DII JUL 7 2023 AM 11:30

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: C-4758	Trn No.: 749154

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
☐ Include a description of any proposed pump test, if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge. ☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.		**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Benjamin Belill
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Benjamin Belill Digitally signed by Benjamin Belill Date: 2023.07.06 10:37:13 -04'00'
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☑ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 24th day of July 20 23, for the State Engineer.

OSE DIT JUL 7 2023 AM 11:30

Mike A. Hamman, P.E, State Engineer

By: K. Parekh
Signature

Kashyap Parekh
Print

Title: Water Resources Manager I
Print

FOR OSE INTERNAL USE Application for Permit, Form WR-07

File No.: C-4758	Trn No.: 749154

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

Trn Desc: C 04758 POD1

File Number: C 04758
Trn Number: 749154

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

Trn Desc: C 04758 POD1 File Number: C 04758
Trn Number: 749154

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion C 04758 POD1 must be completed and the Well Log filed on or before 07/23/2024.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd: Date Rcvd. Corrected:
Formal Application Rcvd: 07/07/2023 Pub. of Notice Ordered:
Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 24 day of Jul A.D., 2023

Mike A. Hamman, P.E., State Engineer

By: K. Parekh
KASHYAP PAREKH

Trn Desc: C 04758 POD1

File Number: C 04758
Trn Number: 749154

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Mike A. Hamman, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

July 10, 2023

XTO Energy Inc.
3401 E. Greene Street
Carlsbad, NM 88220

RE: Well Plugging Plan of Operations for well no. C-4758-POD1

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced well subject to the attached Conditions of Approval. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer. subject to the attached Conditions of Approval.

Well Plugging Plan of Operations form (WD-08) has been updated. Current form can be found on the OSE website at the following link https://www.ose.state.nm.us/Statewide/wdForms.php.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

K. Parekh

Kashyap Parekh
Water Resources Manager I

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623- 8559

Applicant has identified wells, listed below, to be plugged. Scarborough Drilling Inc. (WD-1188) will perform the plugging.

Permittee: XTO Energy Inc.
NMOSE Permit Number: C-4758-POD1

NMOSE File	Casing diameter (inches)	Well depth (feet bgl)	Approximate static water level (feet bgl)	Latitude	Longitude
C-4758-POD1	8.0 (Soil Boring)	110	Unknown	32° 7' 24.40"	103° 53' 47.32''

Specific Plugging Conditions of Approval for Well located in Eddy County, New Mexico.

1. Water well drilling and well drilling activities, including well plugging, are regulated under 19.27.4 NMAC, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the New Mexico Office of the State Engineer (NMOSE). Therefore, the firm of a New Mexico licensed Well Driller shall perform the well plugging.

2. Ground Water encountered: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 287.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 110 feet.

3. Dry Hole: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 26.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 10 feet.

4. Ground Water encountered: Type I/II Portland cement mixed with 5.2 to 6.0 gallons of fresh water per 94-lb sack of cement is approved for the plugging the well.

5. Dry Hole: (a) Drill cuttings up to ten feet of land surface. (b) 10 feet to 0 feet – Hydrated bentonite. The bentonite shall be hydrated separately with its required increments of water prior to being mixed into the cement slurry.

6. Sealant shall be placed by pumping through a tremie pipe extended to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces

the standing water column upwards from below. Tremie pipe may be pulled as necessary to retain minimal submergence in the advancing column of sealant.

7. Should cement "shrinks-back" occur in the well, use of a tremie for topping off is required for cement placement deeper than 20 feet below land surface or if water is present in the casing. The approved sealant for topping off is identified in condition 3. and 4. of these Specific Conditions of Approval.

8. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.

9. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.

10. NMOSE witnessing of the plugging of the soil boring will not be required.

11. Any deviation from this plan must obtain an approved variance from this office prior to implementation.

12. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions.

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 10th day of July 2023

Mike A. Hamman, P.E. State Engineer

By: K. Parekh

Kashyap Parekh
Water Resources Manager I

2

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

Alert! Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology geoinfo.nmt.edu/resources/water/cgmn/ if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email nmbg-waterlevels@nmt.edu, prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP: ☐ Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: TBD C-4758-P001

Name of well owner: XTO Energy Inc

Mailing address: 3401 E. Greene Street County: Eddy

City: Carlsbad State: New Mexico Zip code: 88220

Phone number: 575-200-0729 E-mail: Garrett.Green@ExxonMobil.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Scarborough Drilling Inc

New Mexico Well Driller License No.: WD-1188 Expiration Date: 3/31/2024

IV. WELL INFORMATION: ☐ **Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.**

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 32 deg, 7 min, 24.40 sec
Longitude: 103 deg, 53 min, 47.32 sec, NAD 83

OSE DII JUL 7 2023 AM 11:30

2) Reason(s) for plugging well(s):

Monitoring well to be plugged when no longer needed. Dry borehole will be plugged within 3 days of completion if encountered

3) Was well used for any type of monitoring program? No If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? NA If yes, provide additional detail, including analytical results and/or laboratory report(s):

5) Static water level: NA feet below land surface / feet above land surface (circle one)

6) Depth of the well: 110 feet

7) Inside diameter of innermost casing: 2 inches.

8) Casing material: Temporary SCH 40 PVC

9) The well was constructed with:

☐ an open-hole production interval, state the open interval: NA

☐ a well screen or perforated pipe, state the screened interval(s): NA

10) What annular interval surrounding the artesian casing of this well is cement-grouted? NA

11) Was the well built with surface casing? NO If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? NA If yes, please describe:

12) Has all pumping equipment and associated piping been removed from the well? NA If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

☐ **If plugging method differs between multiple wells on same site, a separate form must be completed for each method.**

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:

Temporary 2 inch well will be removed. If no water is encountered, drill cuttings will be used to ten feet below ground surface (bgs) and plugged from 0 to 10 feet bgs with hydrated bentonite. If groundwater is encountered, borehole will be plugged, tremie pipe from the bottom upwards to a slurry of Type I/II neat cement.

2) Will well head be cut-off below land surface after plugging? YES

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: 287 gallons(8 inch borehole)

4) Type of Cement proposed: Type I/II Neat Cement

5) Proposed cement grout mix: <6.0 gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: _____ batch-mixed and delivered to the site

x mixed on site

OSE DII JUL 7 2023 AM 11:30

7) Grout additives requested, and percent by dry weight relative to cement:

NA

8) Additional notes and calculations:

NA

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

NA

VIII. SIGNATURE:

I, Benjamin Belill, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Benjamin Belill Digitally signed by Benjamin Belill Date: 2023.07.06 10:36:39 -04'00'

Signature of Applicant Date

OSE DII JUL 7 2023 AM11:30

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

X Approved subject to the attached conditions.

_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 10th day of July, 2023

Mike A. Hamman P.E., New Mexico State Engineer

By: K.Parekh

KASHYAP PAREKH

W.R.M. I

GREAT SEAL OF THE STATE OF NEW MEXICO 1912

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

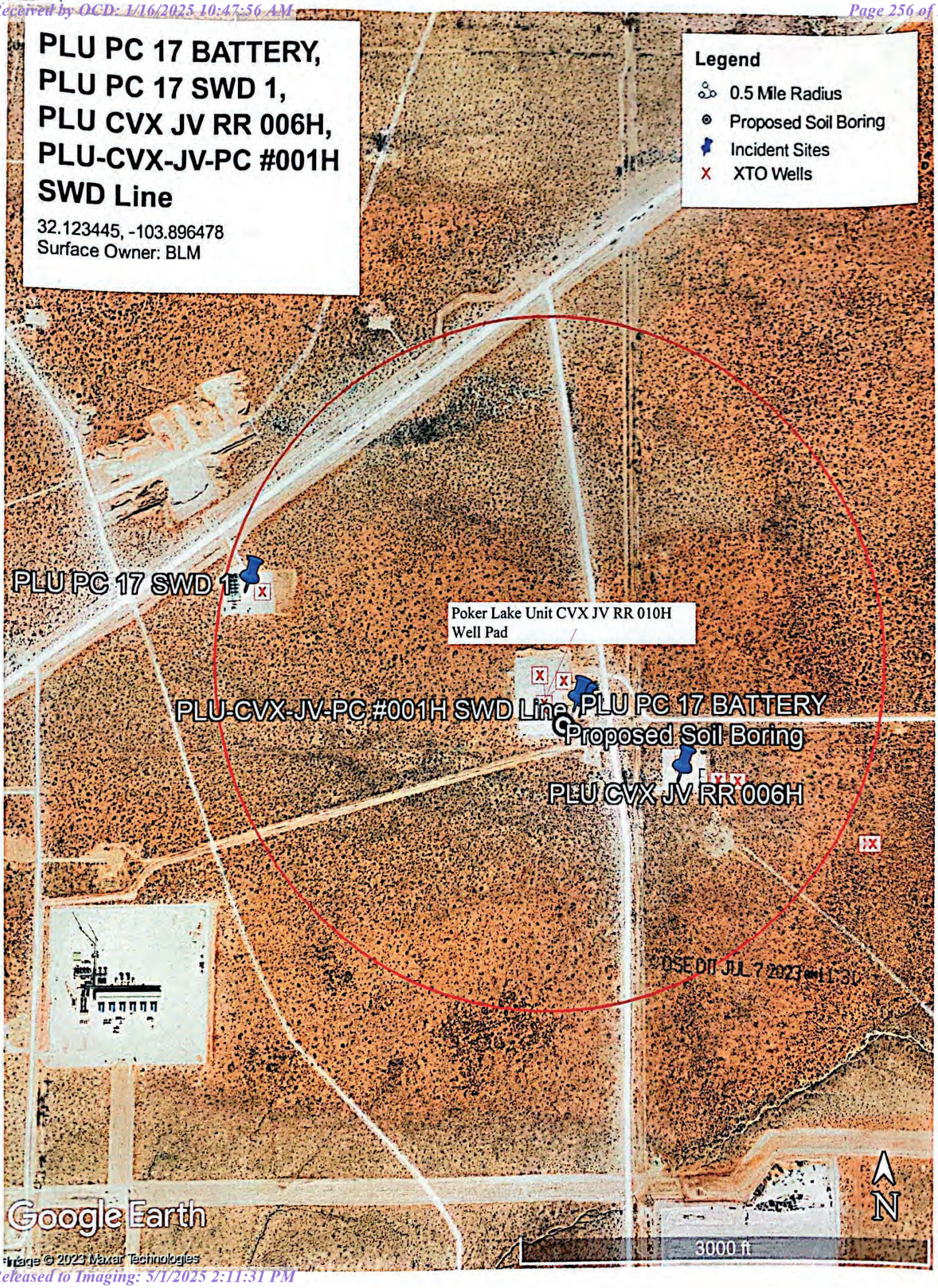
	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	NA	NA	0
Bottom of proposed interval of grout placement (ft bgl)	NA	NA	110
Theoretical volume of grout required per interval (gallons)	NA	NA	287
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	NA	NA	<6.0
Mixed on-site or batch-mixed and delivered?	NA	NA	onsite
Grout additive 1 requested	NA	NA	NA
Additive 1 percent by dry weight relative to cement	NA	NA	NA
Grout additive 2 requested	NA	NA	NA
Additive 2 percent by dry weight relative to cement	NA	NA	NA

OSE OIT JUL 7 2023 AM 11:30

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)	NA	NA	0
Bottom of proposed sealant of grout placement (ft bgl)	NA	NA	10
Theoretical volume of sealant required per interval (gallons)	NA	NA	26
Proposed abandonment sealant (manufacturer and trade name)	NA	NA	Bariod Hole Plug

OSE DII JUL 7 2023 AM11:31


PLU PC 17 BATTERY,
PLU PC 17 SWD 1,
PLU CVX JV RR 006H,
PLU-CVX-JV-PC #001H
SWD Line
32.123445, -103.896478
Surface Owner: BLM
Legend
0.5 Mile Radius
Proposed Soil Boring
Incident Sites
XTO Wells
PLU PC 17 SWD 1
Poker Lake Unit CVX JV RR 010H
Well Pad
PLU-CVX-JV-PC #001H SWD Line
PLU PC 17 BATTERY
Proposed Soil Boring
PLU CVX JV RR 006H
RECEIVED
JUL 7 2023
Google Earth
Image © 2023 Maxar Technologies
3000 ft
N

From: Green, Garrett J
To: Aimee Cole; Tacoma Morrissey; Kalei Jennings; Ben Belill
Cc: Baker, Adrian
Subject: NMOSE Permit Permission
Date: Wednesday, May 18, 2022 5:56:20 PM

[**EXTERNAL EMAIL**]

NMOSE,

The following Ensolum personnel have permission to submit and sign NMOSE well permitting documents on behalf of XTO Energy, Inc.

Ashley Ager
Aimee Cole
Tacoma Morrissey
Kalei Jennings
Ben Belill

Thank you,

Sent from my iPhone

OSE OIL JUL 7 2023 11:31

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220-6292

In Reply Refer To:
3162.4 (NM-080)

July 3, 2023

NM Office of the State Engineer
1900 W. Second St.
Roswell, NM 88201

Re: Poker Lake Unit CVX JV RR 10H
30-015-42158
32.123445, -103.896478
Eddy County, New Mexico

OSE OIT JUL 7 2023 AM 11:31

To Whom It May Concern:

The above well location and the immediate area mentioned above requires advanced soil boring to take place at approximately 110 feet below ground surface. The boring will be secured and left open for 72 hours at which time XTO Energy, Inc will assess for the presence or absence of groundwater. Temporary PVC well material will be placed to total depth of the boring and secured at the surface. If water is encountered at any point during the boring, installation of the soil boring will be plugged using Portland Type 1/11 neat cement less than 6.0 gallons of water per 94lb sack. If no water is encountered, then the soil boring will be plugged. The Bureau of Land Management (landowner) authorizes the access of the area to accomplish depth to groundwater determination of this site.

If you have any questions contact Crisha Morgan, at 575-234-5987.

Sincerely,

CRISHA MORGAN Digitally signed by CRISHA MORGAN Date: 2023.07.03 11:32:45 -06'00'

Crisha A. Morgan
Certified Environmental Protection Specialist

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No. NMLC064894
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☑ Other Soil Boring for determination of depth to groundwater

8. Well Name and No. Poker Lake Unit CVX JV RR 010H

2. Name of Operator XTO Energy. Inc.

9. API Well No. 30-015-42158

3a. Address 3104 E. Greene Street, Carlsbad, New Mexico, 88220

3b. Phone No. *(include area code)* (575) 200-0729

10. Field and Pool or Exploratory Area NA

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
P-17-25S-30E, Latitude 32.123445, Longitude -103.896478

11. Country or Parish, State
Eddy County, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

XTO Energy, Inc. (XTO) requests to advance a soil boring to a depth of approximately 110 feet below ground surface for determination of regional groundwater depth. The soil boring will be located at the active XTO well pad listed above (32.123445, -103.896478). The soil boring will be left open for approximately 72 hours, to allow for the slow infill of groundwater. An oil-water interface probe will be utilized to confirm depth to groundwater in the soil boring. Following the 72 hour waiting period, the soil boring will be backfilled following approved New Mexico Office of the State Engineer plugging procedures. A site map and kmz depicting the location of the site and proposed soil boring location are included with this Form 3160.

OSE DII JUL 7 2023 AM11:31

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*
Garrett Green

Title SSHE Coordinator

Signature [signature]

Date 6/14/2023

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by
CRISHA MORGAN Digitally signed by CRISHA MORGAN Date: 2023.07.03 10:57:59 -06'00'

Title EPS

Date 07/03/2023

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CFO

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

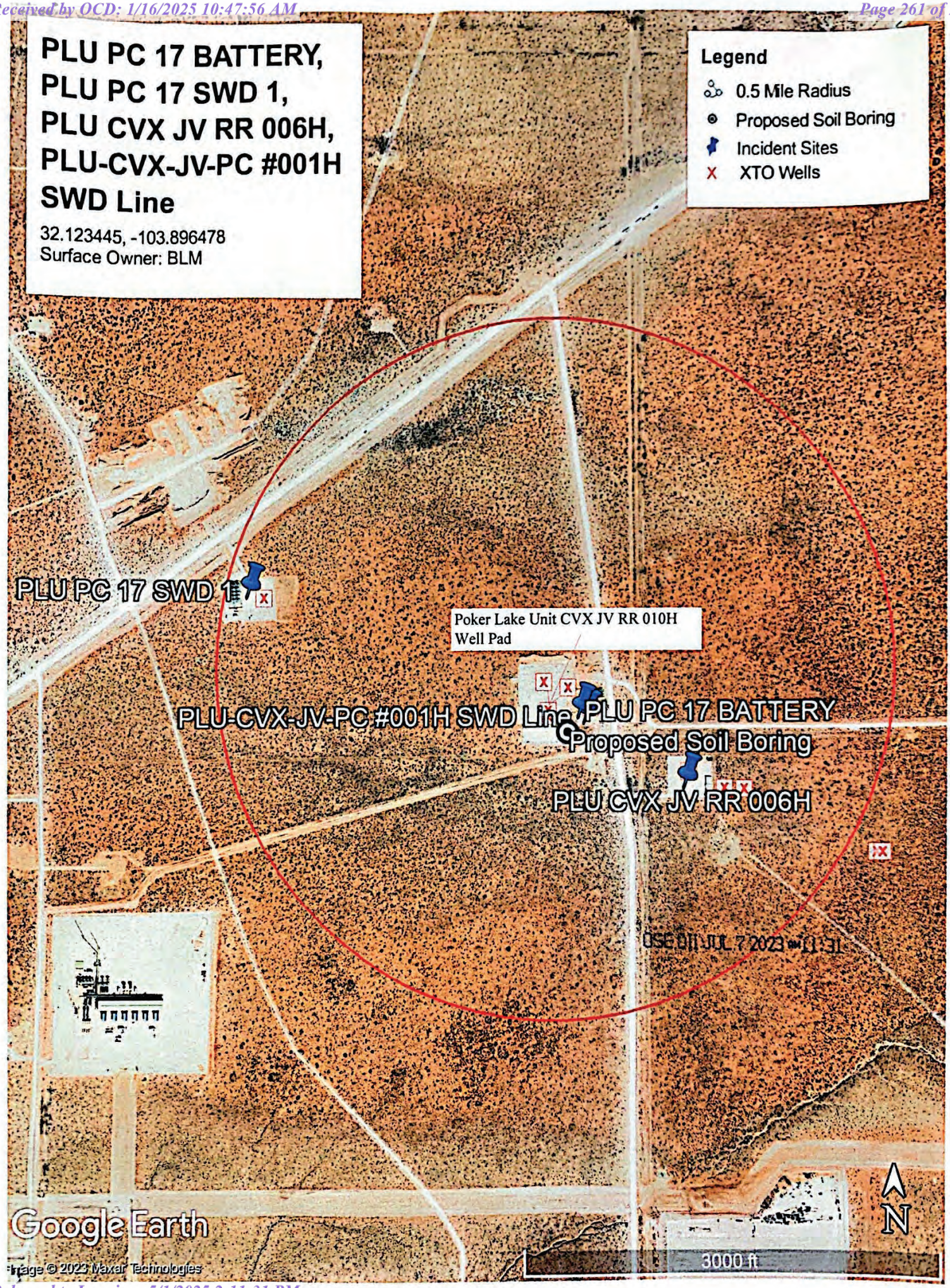
NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

OSE DIT JUL 7 2023 AM 11:31


PLU PC 17 BATTERY,
PLU PC 17 SWD 1,
PLU CVX JV RR 006H,
PLU-CVX-JV-PC #001H
SWD Line
32.123445, -103.896478
Surface Owner: BLM
Legend
0.5 Mile Radius
Proposed Soil Boring
Incident Sites
XTO Wells
PLU PC 17 SWD 1
Poker Lake Unit CVX JV RR 010H
Well Pad
PLU-CVX-JV-PC #001H SWD Line
PLU PC 17 BATTERY
Proposed Soil Boring
PLU CVX JV RR 006H
Google Earth
Image © 2023 Maxar Technologies
3000 ft
N

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
PLU Pierce Canyon 17 Fed SWD 001
nAPP2216839215

Photograph 1 Date: 11/27/23
Description: Excavation from North view

Photograph 2 Date: 11/30/23
Description: Excavation from Northeast view

Photograph 3 Date: 01/26/24
Description: West view of final excavation

Photograph 4 Date: 02/22/24
Description: Backfilled from Northeast view

ENSOLUM

APPENDIX D

Laboratory Analytical Reports and Chain of Custody Documentation

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 421547

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 421547
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2216839215**
Incident Name	**NAPP2216839215 PLU PIERCE CANYON 17 FED SWD 001 @ 0**
Incident Type	**Release Other**
Incident Status	**Remediation Closure Report Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU PIERCE CANYON 17 FED SWD 001
Date Release Discovered	06/05/2022
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Release Other
Did this release result in a fire or is the result of a fire	No
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	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	*Not answered.*
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	Cause: Equipment Failure | Valve | Brine Water | Released: 6 BBL | Recovered: 6 BBL | Lost: 0 BBL.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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: 421547
	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)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
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: 01/16/2025

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: 421547
	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 ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Between ½ and 1 (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)	36900
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	152
GRO+DRO	(EPA SW-846 Method 8015M)	152
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		08/24/2022
On what date will (or did) the final sampling or liner inspection occur		01/26/2024
On what date will (or was) the remediation complete(d)		01/26/2024
What is the estimated surface area (in square feet) that will be reclaimed		3260
What is the estimated volume (in cubic yards) that will be reclaimed		245
What is the estimated surface area (in square feet) that will be remediated		3260
What is the estimated volume (in cubic yards) that will be remediated		245
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: 421547
	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	OWL LANDFILL JAL [fJEG1635837366]
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: 01/16/2025
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: 421547
	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: 421547
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**305640**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**01/26/2024**
What was the (estimated) number of samples that were to be gathered	**5**
What was the sampling surface area in square feet	**1000**

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	3260
What was the total volume (cubic yards) remediated	245
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	3260
What was the total volume (in cubic yards) reclaimed	245
Summarize any additional remediation activities not included by answers (above)	Chloride results from delineation samples as well as floor excavation samples exceeded the reclamation requirement. The sampling locations reporting levels above the strictest Table I Closure Criteria were excavated between November 2023 and January 2024. The final excavation extent at the Site measured approximately 3,260 square feet. A total of approximately 245 cubic yards of impacted soil was removed during excavation activities. Laboratory analytical results for delineation soil samples collected at 0.5 feet bgs and pothole soil sample collected at 3 feet bgs indicated all COC concentrations were compliant with the strictest Table 1 Closure Criteria, providing lateral and vertical delineation of the release. Laboratory analytical results for excavation soil samples collected at depths ranging from 3 feet bgs to 4 feet bgs and sidewall samples indicated all COC concentrations were also compliant with the reclamation requirement. The release remained on the well pad that is currently in operation for oil and gas production purposes. As such, the release area is not expected to be reclaimed until the plugging and abandoning (P&Aing) of all wells associated with the tank battery and decommissioning of all production equipment, pipelines, and tank battery, which will be removed, and the well pad is reclaimed. Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the June 5, 2022, release of brine water. Based on laboratory analytical results from the final excavation and delineation soil samples compliant with Closure Criteria and reclamation requirements where applicable, no further remediation is required. Initial response efforts, excavation of impacted soil, and natural attenuation have mitigated impacts at this Site. Depth to groundwater has been confirmed to be greater than 100 feet bgs within 0.5 miles of the Site and no other sensitive receptors were identified near the release extent.
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: 01/16/2025

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: 421547
	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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 421547
	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 #NAPP2216839215, thank you. This Remediation Closure Report is approved. Please be advised that step-out sampling locations on pad that define the edge of the release will create the outline of the area that will need to be sampled for reclamation. The larger the step-out, the larger the eventual reclamation area that will need be to be sampled once the pad is abandoned and turned back to “land no longer in use.” The reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division.	5/1/2025